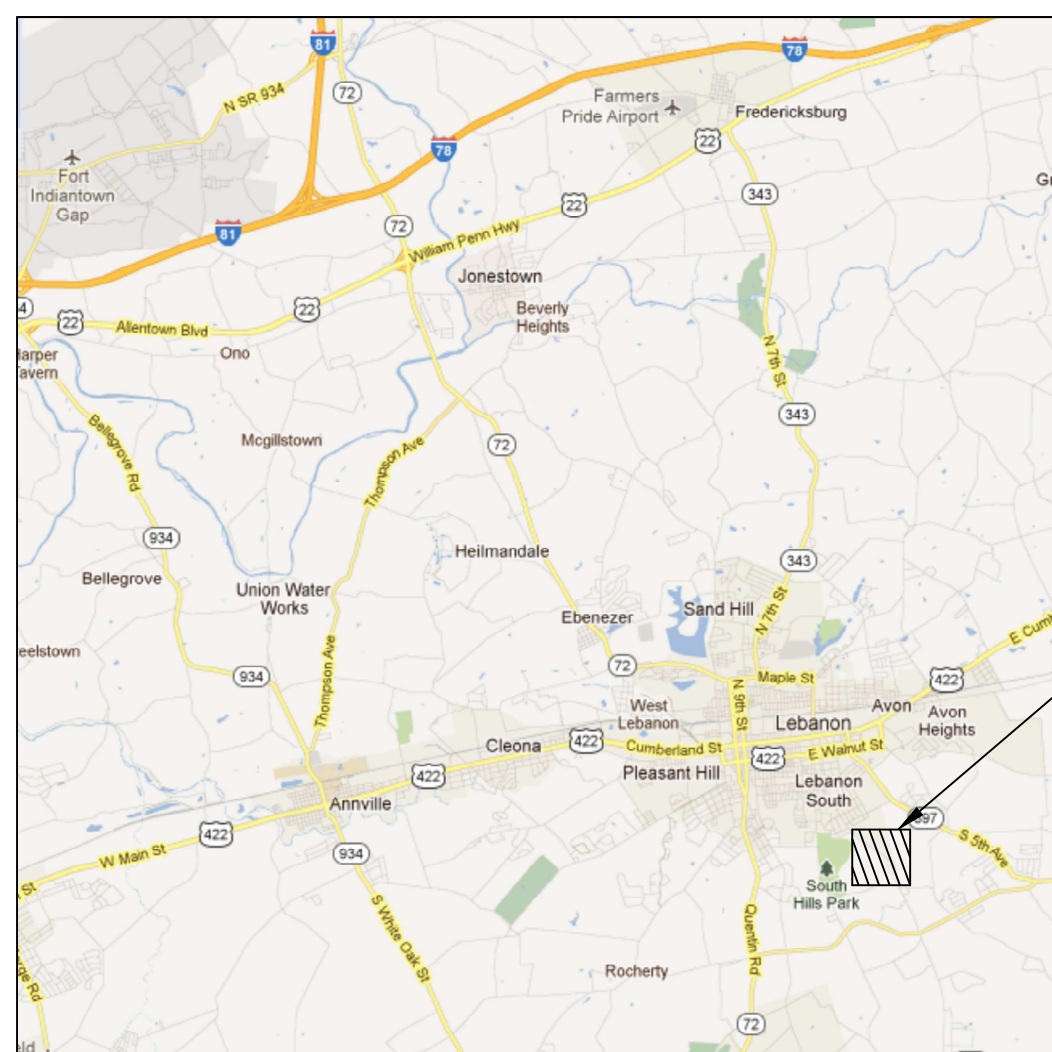


DEPARTMENT OF VETERANS AFFAIRS

LEBANON HEALTH CARE SYSTEM

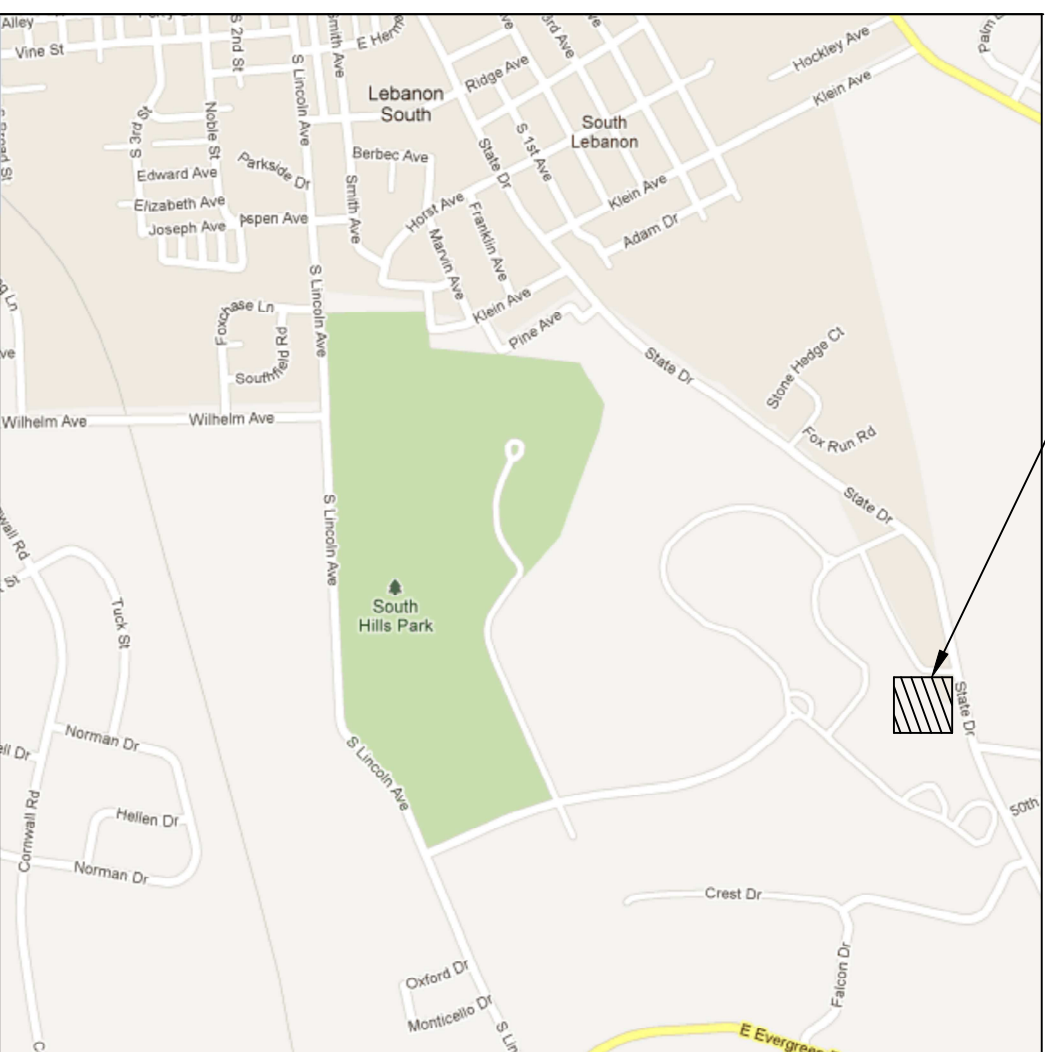
1700 SOUTH LINCOLN AVENUE
LEBANON, PA 17042

STORMWATER MANAGEMENT IMPROVEMENTS PROJECT #595-11-133



AREA MAP

VA LEBANON
SITE
LOCATION



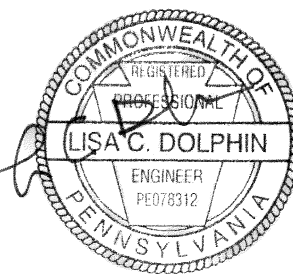
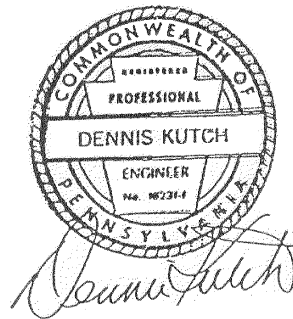
LOCATION MAP

PROJECT
LOCATION

DRAWING INDEX

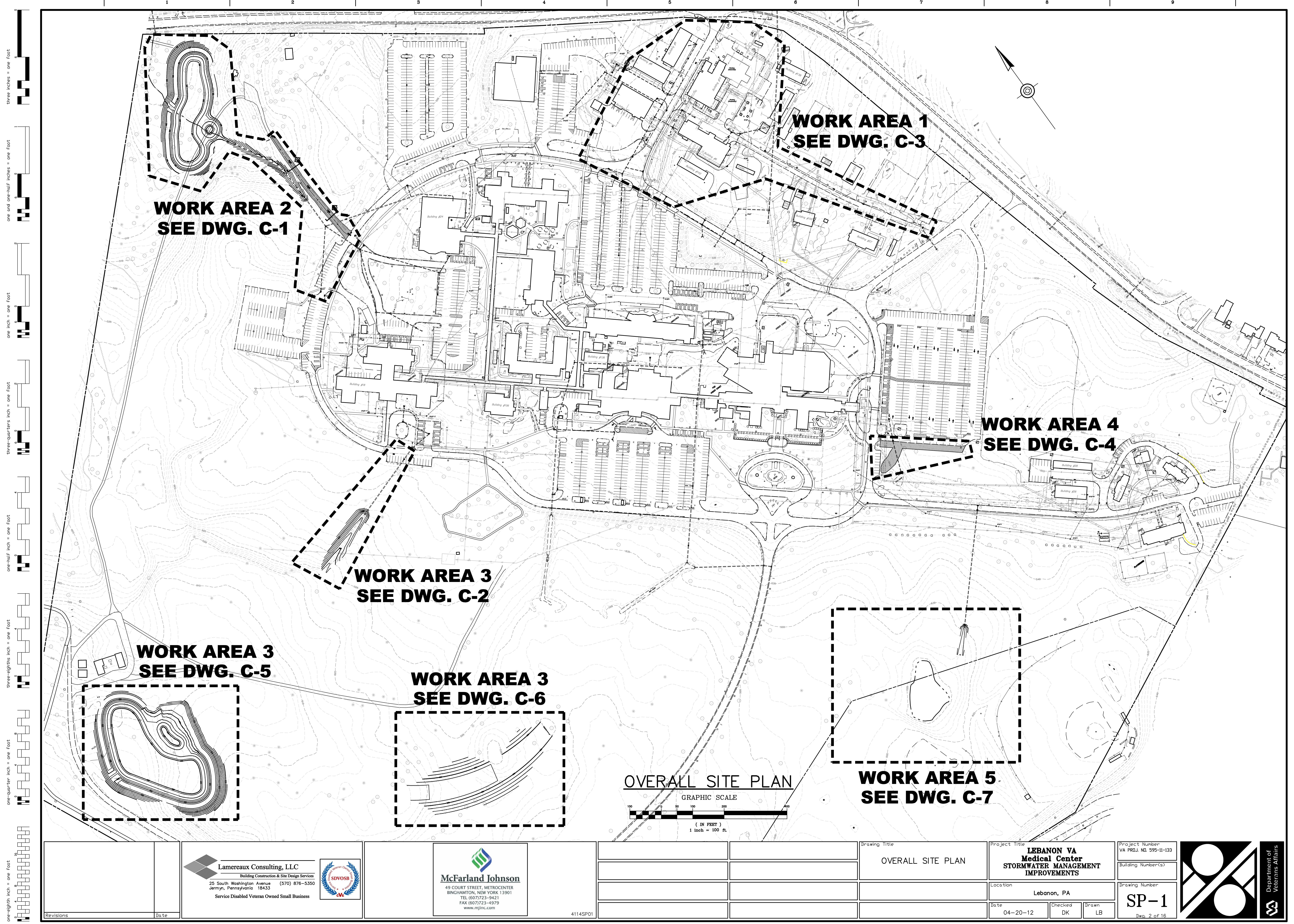
- CS-1 COVER SHEET
- SP-1 OVERALL SITE PLAN
- C-1 PARTIAL STORMWATER IMPROVEMENT PLAN
- C-2 PARTIAL STORMWATER IMPROVEMENT PLAN
- C-3 PARTIAL STORMWATER IMPROVEMENT PLAN
- C-4 PARTIAL STORMWATER IMPROVEMENT PLAN
- C-5 PARTIAL STORMWATER IMPROVEMENT PLAN
- C-6 PARTIAL STORMWATER IMPROVEMENT PLAN
- C-7 PARTIAL STORMWATER IMPROVEMENT PLAN

- CG-1 RETENTION BASIN GRADING AND LANDSCAPING
- CG-2 RETENTION BASIN GRADING AND LANDSCAPING
- D-1 SITE DETAILS
- D-2 E&S NOTES AND DETAILS
- D-3 PIPE PROFILE AND ROADWAY SECTIONS
- D-4 DRAINAGE DETAILS
- D-5 RETENTION BASIN DETAILS



BID DOCUMENTS

 Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business		 McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607) 723-5421 FAX (607) 723-4979 www.mjinc.com		Drawing Title COVER SHEET		Project Title LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS		Project Number VA PROJ. NO. 595-11-133			
Revisions		Date		Location Lebanon, PA		Date 04-20-12		Checked DK		Drawn LB	
								Drawing Number CS-1		Dwg. 1 of 16	



**WORK AREA 2
SEE DWG. C-1**

**WORK AREA 1
SEE DWG. C-3**

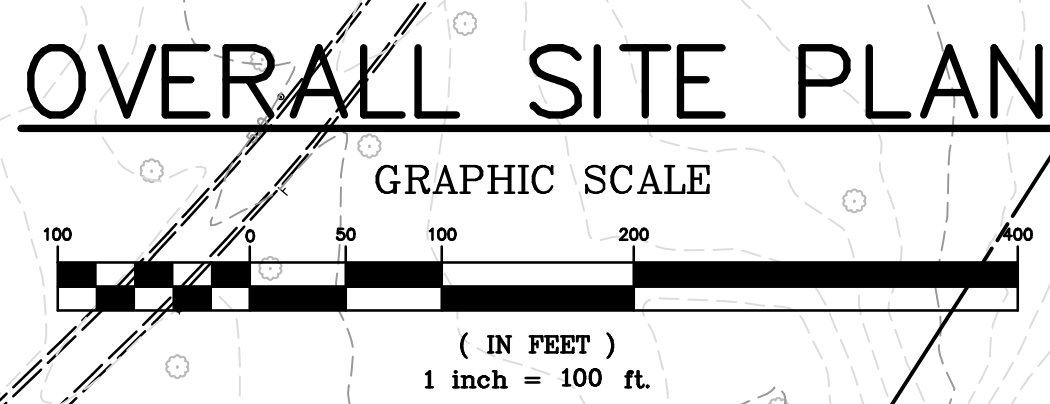
**WORK AREA 4
SEE DWG. C-4**





**WORK AREA 3
SEE DWG. C-2**

**WORK AREA 3
SEE DWG. C-5**

**WORK AREA 3
SEE DWG. C-6**

**WORK AREA 5
SEE DWG. C-7**

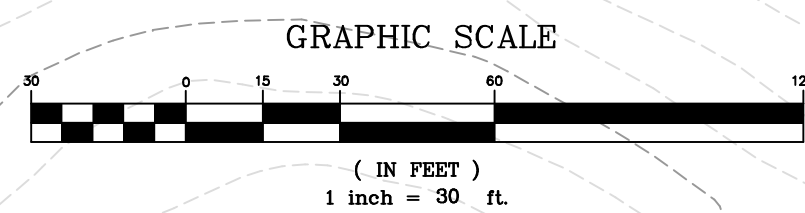


		 <div>Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business</div> 		 <div>McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607) 723-9421 FAX (607) 723-4979 www.mjinc.com</div>		4114SP01						Drawing Title OVERALL SITE PLAN		Project Title LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS		Project Number VA PROJ. NO. 595-11-133		 <div>Department of Veterans Affairs</div>	
												Location Lebanon, PA		Building Number(s)					
												Date 04-20-12		Checked DK		Drawing Number SP-1			
														Drawn LB		Dwg. 2 of 16			
Revisions		Date																	

LEGEND

- 525-- Existing Contour
--- Existing Edge of Pav
--- Property Line
--- S --- Existing Sanitary Line
--- W --- Existing Water Line
--- AW --- Abandoned Water Line
--- G --- Existing Gas Line
--- AG --- Abandoned Gas Line
--- T --- Existing Telephone Duct
--- ECC --- Ex. Energy Management System Conduit
--- el --- Old Electric Lines/Manholes
--- E --- Existing Electric Lines
--- L --- Existing Light Cable
--- ST --- Existing Steam Line
--- st --- Abandoned Steam Line
--- DB --- Existing Duct Bank 13200 Volt
--- D --- Direct Burial 13200 Volt
--- db --- Abandoned Direct Burial 13200 V.
===== EXISTING PIPE TO BE REMOVED AND REPLACED
----- NEW S.L.C.P.P.
⊙ NEW CATCH BASIN
⊙ NEW DRAINAGE MANHOLE
▨ PAVEMENT RESTORATION
▤ GRASS RESTORATION
--- NEW CURB

PARTIAL STORMWATER
IMPROVEMENT PLAN



Lamereaux Consulting, LLC
Building Construction & Site Design Services
25 South Washington Avenue (570) 876-5350
Jermyn, Pennsylvania 18433
Service Disabled Veteran Owned Small Business



McFarland Johnson
49 COURT STREET, METROCENTER
BINGHAMTON, NEW YORK 13901
TEL (607) 723-9421
FAX (607) 723-4979
www.mjinc.com

4114C010

Drawing Title
**PARTIAL
STORMWATER
IMPROVEMENT PLAN**

Project Title
**LEBANON VA
Medical Center
STORMWATER MANAGEMENT
IMPROVEMENTS**

Location
Lebanon, PA

Date
04-20-12

Checked
DK

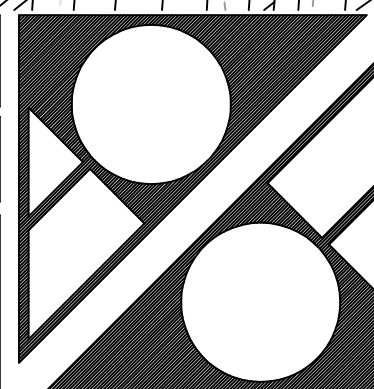
Drawn
AG/LB

Project Number
VA PROJ. NO. 595-11-133

Building Number(s)

Drawing Number
C-1

Dwg. 3 of 16



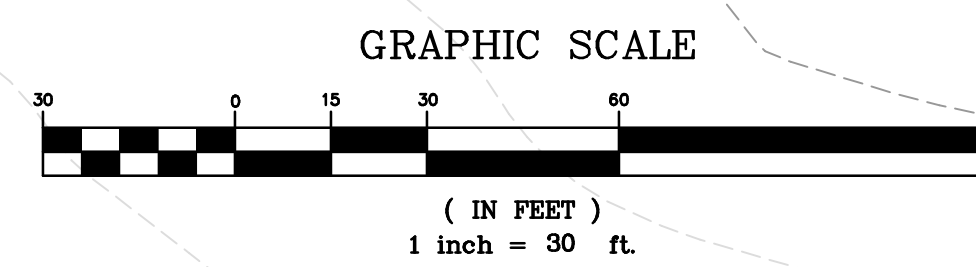
Department of
Veterans Affairs

LEGEND

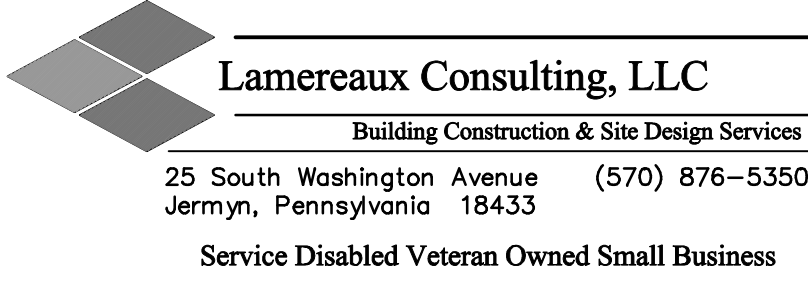


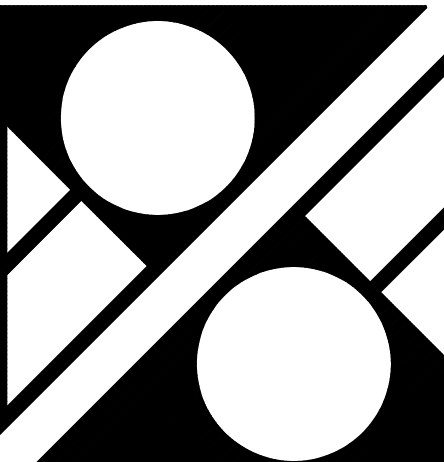
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NEW DRAINAGE MANHOLE
PAVEMENT RESTORATION
GRASS RESTORATION
NEW CURB

MATCHLINE — SEE DRAWING TO THE RIGHT

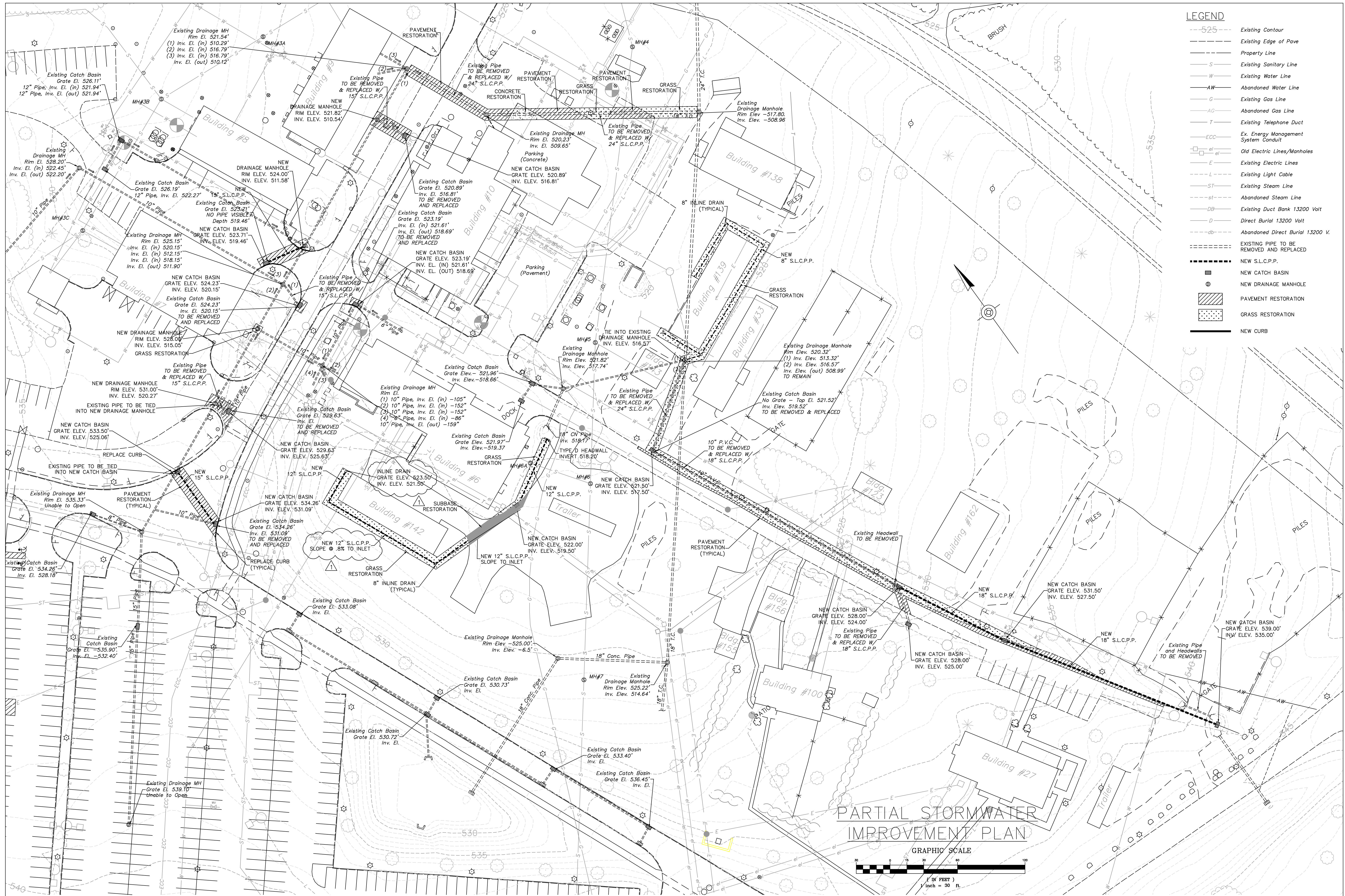
PARTIAL STORMWATER
IMPROVEMENT PLAN



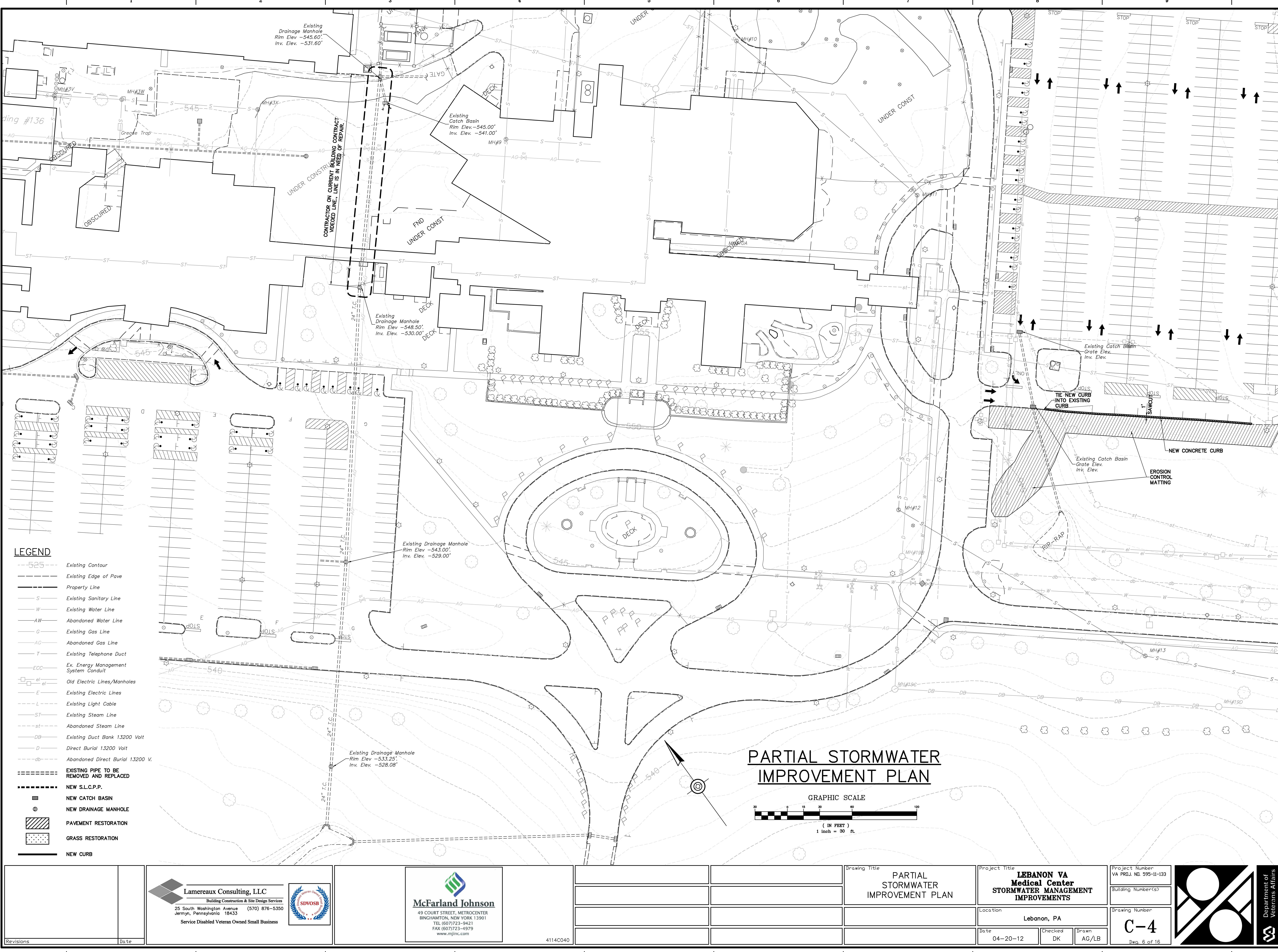
MATCHLINE — SEE DRAWING TO THE LEFT

Revisions		Date		 Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermy, Pennsylvania 18433 Service Disabled Veteran Owned Small Business				 McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607) 723-9421 FAX (607) 723-4979 www.mjinc.com		4114C020						Drawing Title PARTIAL STORMWATER IMPROVEMENT PLAN		Project Title LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS		Project Number VA PROJ. NO. 595-11-133				Department of Veterans Affairs	
																Location Lebanon, PA		Drawing Number C-2 Dwg. 4 of 16							
																Date 04-20-12		Checked DK		Drawn AG/LB					

three inches = one foot
one and one-half inches = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot



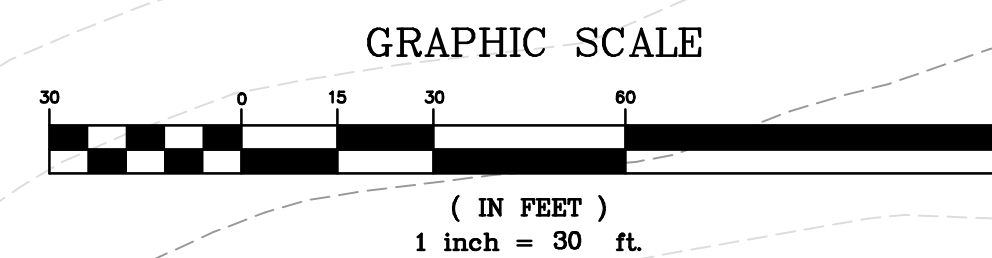
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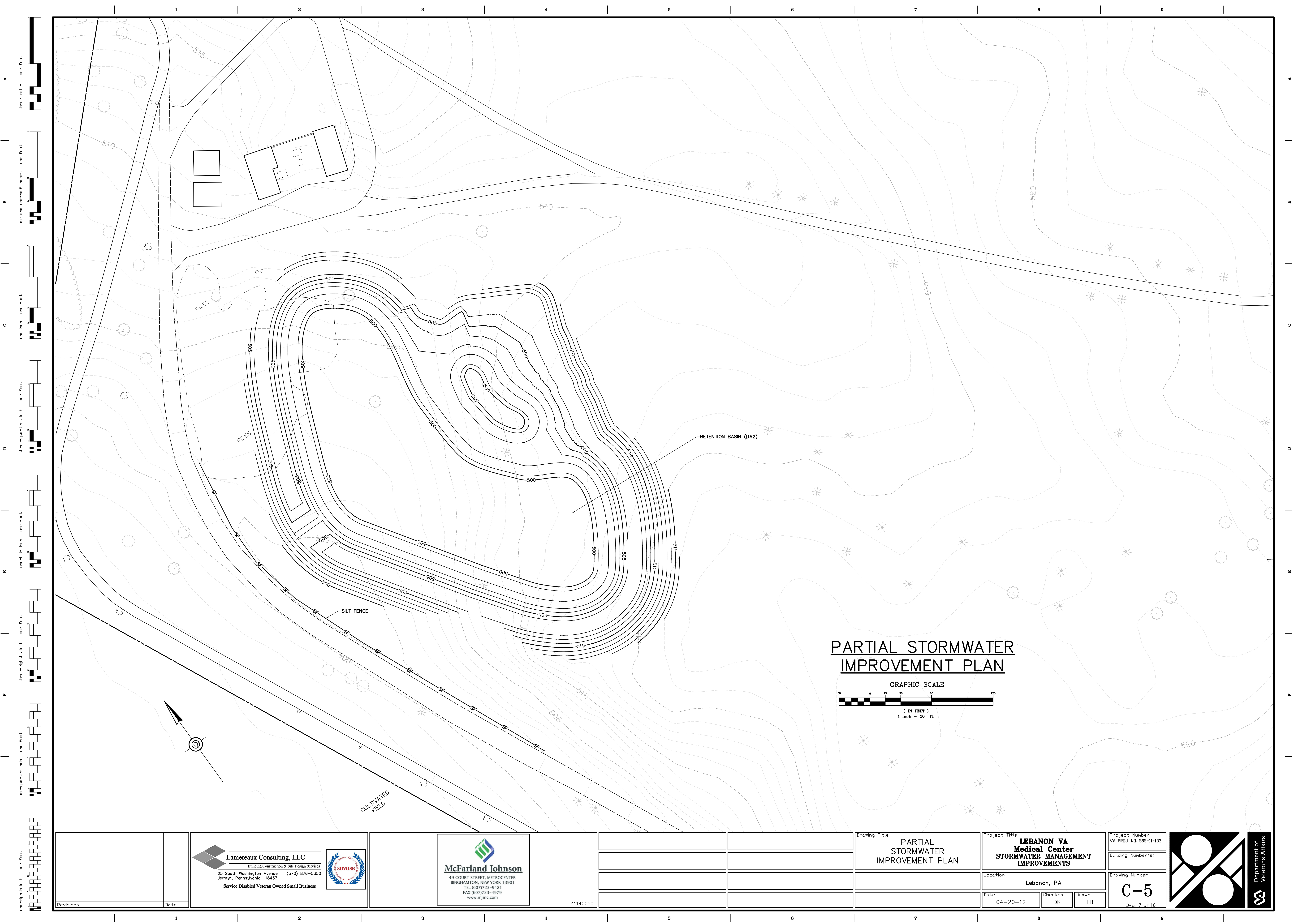
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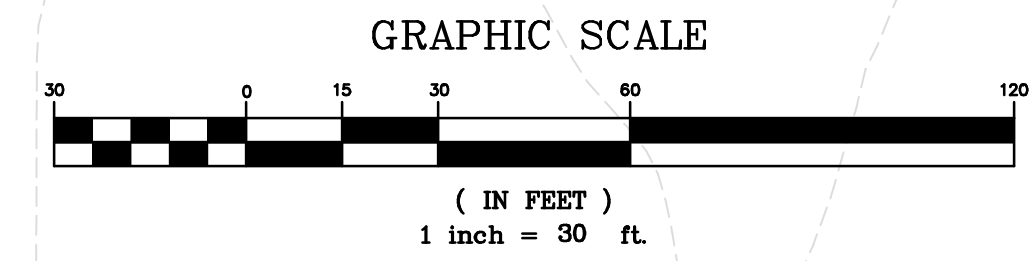
PARTIAL STORMWATER
IMPROVEMENT PLAN







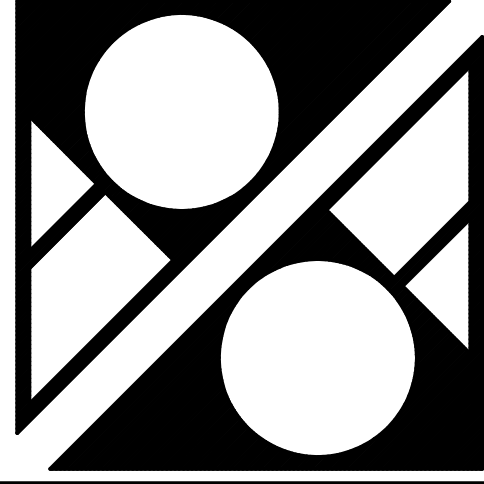
	<div><p>Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business</p></div> <div></div>	<div><p>McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607) 723-9421 FAX (607) 723-4979 www.mjinc.com</p></div> <div>4114C040</div>			<div>Drawing Title</div> <div>PARTIAL STORMWATER IMPROVEMENT PLAN</div>	<div>Project Title</div> <div>LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS</div>	<div>Project Number</div> <div>VA PROJ. NO. 595-11-133</div>	<div>Building Number(s)</div> <div></div>	<div>Drawing Number</div> <div>C-4 Dwg. 6 of 16</div>		<div>Department of Veterans Affairs</div>
<div>Revisions</div> <div></div>	<div>Date</div> <div></div>					<div>Date</div> <div>04-20-12</div>	<div>Checked</div> <div>DK</div>	<div>Drawn</div> <div>AG/LB</div>			



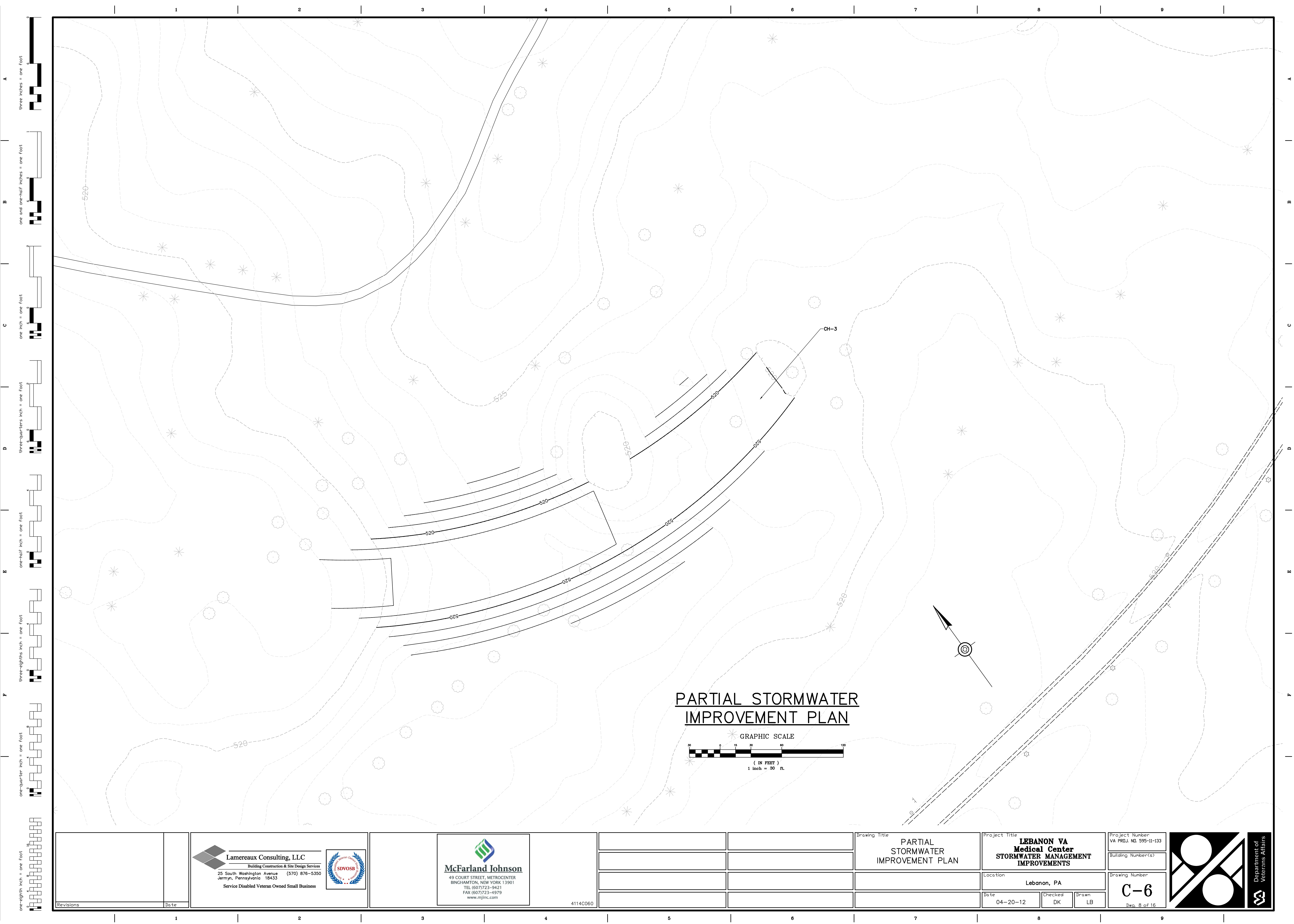
PARTIAL STORMWATER
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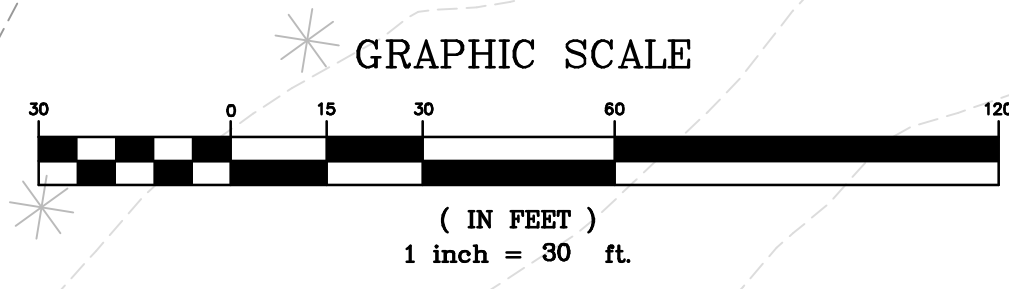
		<div><div>Lamereaux Consulting, LLC</div><div>Building Construction & Site Design Services</div><div>25 South Washington Avenue (570) 876-5350</div><div>Jermyn, Pennsylvania 18433</div><div>Service Disabled Veteran Owned Small Business</div></div> <div></div>		<div><div>McFarland Johnson</div><div>49 COURT STREET, METROCENTER</div><div>BINGHAMTON, NEW YORK 13901</div><div>TEL (607)723-9421</div><div>FAX (607)723-4979</div><div>www.mjinc.com</div></div> <div>4114C050</div>				Drawing Title PARTIAL STORMWATER IMPROVEMENT PLAN		Project Title LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS		Project Number VA PROJ. NO. 595-11-133		 <div>Department of Veterans Affairs</div>
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								Location Lebanon, PA						
								Date 04-20-12		Checked DK	Drawn LB			



Department of
Veterans Affairs



**PARTIAL STORMWATER
IMPROVEMENT PLAN**



<div>Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business</div> <div></div>		<div>McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607) 723-9421 FAX (607) 723-4979 www.mjinc.com</div> <div>4114C060</div>		<table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>										<table><tr><td colspan="2">Drawing Title</td></tr><tr><td colspan="2">PARTIAL STORMWATER IMPROVEMENT PLAN</td></tr><tr><td colspan="2"></td></tr><tr><td colspan="2"></td></tr></table>		Drawing Title		PARTIAL STORMWATER IMPROVEMENT PLAN						<table><tr><td colspan="2">Project Title</td></tr><tr><td colspan="2">LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS</td></tr><tr><td colspan="2">Location</td></tr><tr><td colspan="2">Lebanon, PA</td></tr><tr><td>Date</td><td>Checked</td></tr><tr><td>04-20-12</td><td>DK</td></tr><tr><td></td><td>Drawn</td></tr><tr><td></td><td>LB</td></tr></table>		Project Title		LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS		Location		Lebanon, PA		Date	Checked	04-20-12	DK		Drawn		LB	<table><tr><td>Project Number</td></tr><tr><td>VA PROJ. NO. 595-11-133</td></tr><tr><td>Building Number(s)</td></tr><tr><td></td></tr><tr><td>Drawing Number</td></tr><tr><td>C-6</td></tr><tr><td>Dwg. 8 of 16</td></tr></table>	Project Number	VA PROJ. NO. 595-11-133	Building Number(s)		Drawing Number	C-6	Dwg. 8 of 16	<div></div> <div>Department of Veterans Affairs</div>
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New Catch Basin
New Drainage Manhole
Pavement Restoration
Grass Restoration
New Curb
Proposed Contour
Turf Reinforced Mats
Riprap Apron
Planting Key
Deciduous Tree
Deciduous Shrub
Pond Planting

PLANTING SCHEDULE

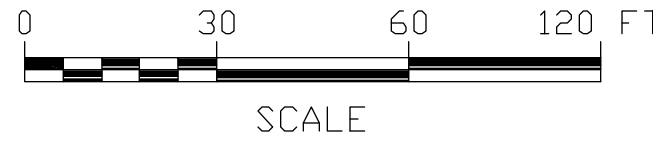
KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
AC	6	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	B&B	8" HT	MULTI-STEM
AR	5	ACER RUBRUM	RED MAPLE	B&B	2" CAL	SPECIMEN
CA	6	CLETHRA ALNIFOLIA	SWEET PEPPER-BUSH	#3 CONT	24" HT	48" O.C.
CO	9	CEPHALANTHUS OCCIDENTALIS	COMMON BUTTONBUSH	#3 CONT	18" HT	-
CS	8	CORNUS SERICEA	REDTIG. DOGWOOD	#3 CONT	24" HT	48" O.C.
PO	3	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	B&B	2" CAL	SPECIMEN
SM	2	SAMBUCUS CANADENSIS	ELDERBERRY	B&B	5" HT	MULTI-STEM
SN	7	SALIX NIGRA	BLACK WILLOW	B&B	2" CAL	SPECIMEN
MX1	8	ERNMX-261	PA. PIEDMONT PROVINCE FACW MIX	SEED	POUNDS	*
MX2	9	ERNMX-128	SEASONALLY FLOODED WILDOPE FLOOD MIX	SEED	POUNDS	*

*- SEED MIXES ARE A PRODUCT OF ERNST CONSERVATION SEEDS. SEEDING RATE: 20LB PER ACRE. QUANTITY REFERS TO POUNDS REQUIRED.

LANDSCAPING PLAN

NOTE:

SEE DRAWING D-4 FOR TRM AND RIPRAP APRON TABLE AND DETAILS.



LANDSCAPING NOTES:

- ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERMEN, ANSI Z60.1
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFFS.
- THE CONTRACTOR SHALL STAKEOUT THE PLANTINGS FOR THE APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- SHOULD LOCATION OF TREES BE WITHIN FIVE (5) FEET OF UNDERGROUND UTILITIES, RELOCATE SAID TREE A MINIMUM OF FIVE (5) FEET FROM ROOT BALL TO UTILITIES.
- SHOULD LARGE DECIDUOUS TREES BE WITHIN TWENTY (20) FEET OF OVERHEAD WIRES, RELOCATE SAID TREE A MINIMUM OF TWENTY (20) FEET FROM OVERHEAD WIRES.
- MULCH ALL WOODY PLANT MATERIAL BEDS WITH THREE (3) INCH DEPTH, SHREDDED, HARDWOOD BARK MULCH.
- STAKE TREES IMMEDIATELY AFTER PLANTING ON WINDY SITES, AT THE DISCRETION OF THE LANDSCAPE ARCHITECT AND ONLY IF A LONG RANGE MAINTENANCE PLAN IS GOING TO BE IMPLEMENTED FOR FUTURE REMOVAL AFTER ROOT ESTABLISHMENT PERIOD.
- A ONE (1) YEAR GUARANTEE SHALL BE PROVIDED ON ALL PLANT MATERIALS FROM THE DATE OF FINAL ACCEPTANCE.
- STABILIZE TOPSOIL WITHIN THE CONSTRUCTION YEAR'S GROWING SEASON. IF THIS CANNOT BE ACHIEVED, THE TOPSOIL SPREADING SHALL NOT OCCUR UNTIL THE FOLLOWING SPRING AND INTERIM STABILIZATION MEASURES SHALL BE USED TO PREVENT EROSION OF SUBGRADE. THE MEASURE OPTION(S) SHALL BE PRESENTED TO THE DESIGN ENGINEER OR LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.
- THE DESIGN ENGINEER, SITE SUPERVISOR, AND/OR LANDSCAPE ARCHITECT SHALL CHECK COMPACTION AND SUITABILITY OF SOILS (INCLUDING PH) FOR DESIRED PLANTINGS PRIOR TO INSTALLATION OF PLANTINGS.
- PLANTING BACKFILL MIXTURE AND FERTILIZER AMENDMENTS SHALL BE BASED ON SOILS TEST RESULTS.
- PROTECTION FROM WATERFOWL DURING PERIOD OF ESTABLISHMENT SHALL BE REQUIRED.
- CONTRACTOR SHALL PROVIDE PROOF OF PRIOR EXPERIENCE CONSTRUCTING RETENTION BASIN GRADING AND LANDSCAPING ELEMENTS. A MINIMUM OF THREE (3) REFERENCES IS REQUIRED WITH THE PROPOSAL SUBMISSION.
- A "QUALIFIED ENVIRONMENTAL SUPERVISOR" WILL BE PRESENT ON SITE WHILE WORK IS BEING PERFORMED IN THE RETENTION BASIN AREAS, FOR THE PURPOSES OF THIS PROJECT, A "QUALIFIED ENVIRONMENTAL SUPERVISOR" SHALL BE AN INDIVIDUAL, REPRESENTING THE OWNER, WHO IS EDUCATED IN OR HAS RECEIVED SPECIALIZED TRAINING IN THE CONSTRUCTION OF RETENTION BASIN GRADING AND LANDSCAPING.
- CONTRACTOR SHALL INSTALL VEGETATION PROTECTION BARRIER PRIOR TO COMMENCING CLEARING AND GRADING ACTIVITIES AND SHALL NOT ENTER THE PROTECTED SITE DURING CONSTRUCTION.
- PROTECT ALL EXISTING TREES AND SHRUBS OUTSIDE OF THE CLEARING AND GRADING LIMITS. TRAVEL OVER THE ROOT SYSTEMS SHALL BE AVOIDED BY VEHICULAR AND HEAVY EQUIPMENT. NO MOTORIZED VEHICLE SHALL BE LEFT IDLING UNDER A TREE CANOPY.

1
C-7

Revisions	Date

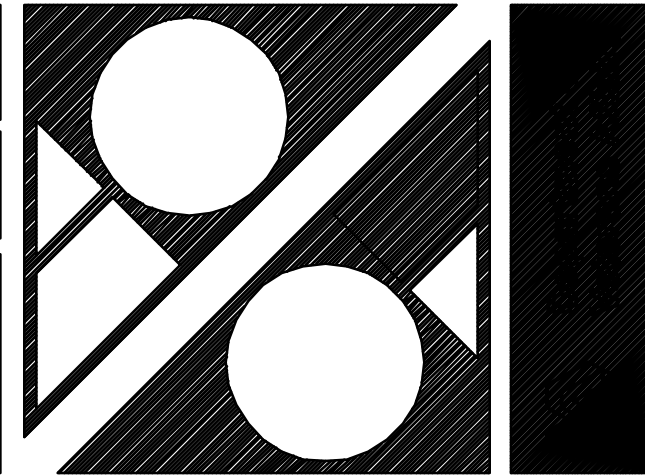
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McFarland Johnson
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BINGHAMTON, NEW YORK 13901
TEL (607)723-9421
FAX (607)723-4979
www.mjinc.com

Drawing Title
PARTIAL STORMWATER IMPROVEMENT PLAN

Project Title
LEBANON VA Medical Center STORMWATER STUDY
Location
Lebanon, PA
Date
4/20/2012
Checked
LCD
Drawn
AEB

Project Number
VK PROJ. NO. 595-11-133
Building Number(s)
Drawing Number
C-7
Dwn: 9 of 16



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▨	Riprap Apron
+	Planting Key
+	Deciduous Tree
○	Deciduous Shrub
▨	Pond Planting

PLANTING SCHEDULE

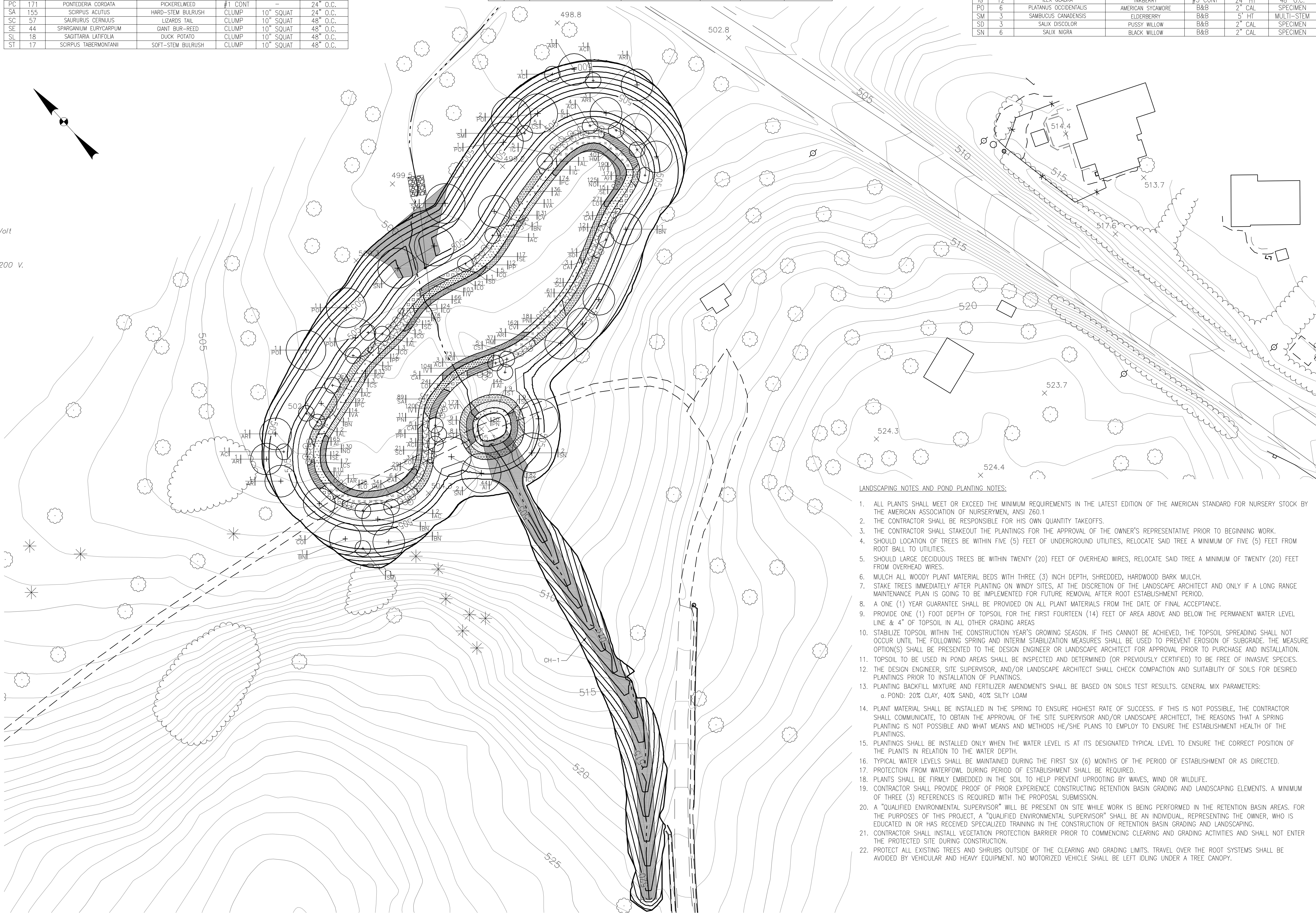
KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
ZONE 1 - OPEN WATER (1'+ WATER DEPTH)						
NO	402	MYPHAEA ODORATA	WHITE WATERLILY	#1 CONT	24" O.C.	
PN	49	POTAMOGETON NODOSUS	LONG-LEAVED POND PLANT	#1 CONT	48" O.C.	
PP	44	POTAMOGETON PECTINUS	SAGO PONDWEED	#1 CONT	48" O.C.	
VA	25	Vallisneria spiralis	WILD CELERY	#1 CONT	48" O.C.	
ZONE 2 - AQUATIC BENCH (6-12" WATER DEPTH)						
HM	111	HIBISCUS MOSCHEUTOS	MARSH HIBISCUS	#2 CONT	18" HT	36" O.C.
PC	171	PONTEDERIA CORDATA	PICKERELWEED	#1 CONT	24" O.C.	
SA	155	SCIRPUS ACUTUS	HARD-STEM BULRUSH	CLUMP	10" SQUAT	24" O.C.
SC	57	SAURURUS CERNUUS	LIZARDS TAIL	CLUMP	10" SQUAT	48" O.C.
SE	44	SPARGANIUM EURYCARPUM	GIANT BUR-REED	CLUMP	10" SQUAT	48" O.C.
SL	18	SAGITTARIA LATIFOLIA	DUCK POTATO	CLUMP	10" SQUAT	48" O.C.
ST	17	SCIRPUS TABERMONTANII	SOFT-STEM BULRUSH	CLUMP	10" SQUAT	48" O.C.

PLANTING SCHEDULE (CON'T)

KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
ZONE 3 - LOW MARSH (0-6" WATER DEPTH)						
AI	296	ASCELEPSIS INCARNATA	SWAMP MILKWEED	CONT	2" CELL	12" O.C.
AL	5	ALNUS INCANA RUGOSA	SPECKLED ALDER	B&B	1 1/2" CAL	SPECIMEN
CO	19	CEPHALANTHUS OCCIDENTALIS	COMMON BUTTOMBUSH	#3 CONT	18" HT	48" O.C.
CV	285	CAREX VULPINOIDEA	FOX SEDGE	CLUMP	10" SQUAT	12" O.C.
IV	627	IRIS VERSICOLOR	BLUE FLAG IRIS	#1 CONT	12" O.C.	
LO	121	LEERSIA ORYZOIDES	RICE CUTGRASS	CLUMP	10" SQUAT	24" O.C.

PLANTING SCHEDULE (CON'T)

KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
ZONE 4 - HIGH MARSH, ZONE 5 - FLOODPLAIN TERRACE, AND ZONE 6 - UPLAND						
AC	17	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	B&B	8" HT	MULTI-STEM
AR	12	ACER RUBRUM	RED MAPLE	B&B	2" CAL	SPECIMEN
BN	6	BETULA NIGRA "HERITAGE"	HERITAGE RIVER BIRCH	B&B	2" CAL	SPECIMEN
CA	24	CLETHRA ALNIFOLIA	SWEET PEPPER-BUSH	#3 CONT	24" HT	48" O.C.
CS	20	CORNUS SERICEA	REDTIG DOGWOOD	#3 CONT	24" HT	48" O.C.
IC	12	ILEX GLABRA	INKBERRY	#3 CONT	24" HT	48" O.C.
IO	6	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	B&B	2" CAL	SPECIMEN
SM	3	SAMBUCUS CANADENSIS	ELDERBERRY	B&B	5" HT	MULTI-STEM
SD	3	SAUX DISCOLOR	PUSSY WILLOW	B&B	2" CAL	SPECIMEN
SN	6	SAUX NIGRA	BLACK WILLOW	B&B	2" CAL	SPECIMEN



LANDSCAPING NOTES AND POND PLANTING NOTES:

- ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERMEN, ANSI Z60.1
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY TAKEOFFS.
- THE CONTRACTOR SHALL STAKEOUT THE PLANTINGS FOR THE APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- SHOULD LOCATION OF TREES BE WITHIN FIVE (5) FEET OF UNDERGROUND UTILITIES, RELOCATE SAID TREE A MINIMUM OF FIVE (5) FEET FROM ROOT BALL TO UTILITIES.
- SHOULD LARGE DECIDUOUS TREES BE WITHIN TWENTY (20) FEET OF OVERHEAD WIRES, RELOCATE SAID TREE A MINIMUM OF TWENTY (20) FEET FROM OVERHEAD WIRES.
- MULCH ALL WOODY PLANT MATERIAL BEDS WITH THREE (3) INCH DEPTH, SHREDDED, HARDWOOD BARK MULCH.
- STAKE TREES IMMEDIATELY AFTER PLANTING ON WINDY SITES, AT THE DISCRETION OF THE LANDSCAPE ARCHITECT AND ONLY IF A LONG RANGE MAINTENANCE PLAN IS GOING TO BE IMPLEMENTED FOR FUTURE REMOVAL AFTER ROOT ESTABLISHMENT PERIOD.
- A ONE (1) YEAR GUARANTEE SHALL BE PROVIDED ON ALL PLANT MATERIALS FROM THE DATE OF FINAL ACCEPTANCE.
- PROVIDE ONE (1) FOOT DEPTH OF TOPSOIL FOR THE FIRST FOURTEEN (14) FEET OF AREA ABOVE AND BELOW THE PERMANENT WATER LEVEL LINE & 4" OF TOPSOIL IN ALL OTHER GRADING AREAS
- STABILIZE TOPSOIL WITHIN THE CONSTRUCTION YEAR'S GROWING SEASON. IF THIS CANNOT BE ACHIEVED, THE TOPSOIL SPREADING SHALL NOT OCCUR UNTIL THE FOLLOWING SPRING AND INTERIM STABILIZATION MEASURES SHALL BE USED TO PREVENT EROSION OF SUBGRADE. THE MEASURE OPTION(S) SHALL BE PRESENTED TO THE DESIGN ENGINEER OR LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.
- TOPSOIL TO BE USED IN POND AREAS SHALL BE INSPECTED AND DETERMINED (OR PREVIOUSLY CERTIFIED) TO BE FREE OF INVASIVE SPECIES.
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- PLANTING BACKFILL MIXTURE AND FERTILIZER AMENDMENTS SHALL BE BASED ON SOILS TEST RESULTS. GENERAL MIX PARAMETERS:
o. POND: 20% CLAY, 40% SAND, 40% SILTY LOAM
- PLANT MATERIAL SHALL BE INSTALLED IN THE SPRING TO ENSURE HIGHEST RATE OF SUCCESS. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL COMMUNICATE, TO OBTAIN THE APPROVAL OF THE SITE SUPERVISOR AND/OR LANDSCAPE ARCHITECT, THE REASONS THAT A SPRING PLANTING IS NOT POSSIBLE AND WHAT MEANS AND METHODS HE/SHE PLANS TO EMPLOY TO ENSURE THE ESTABLISHMENT HEALTH OF THE PLANTINGS.
- PLANTINGS SHALL BE INSTALLED ONLY WHEN THE WATER LEVEL IS AT ITS DESIGNATED TYPICAL LEVEL TO ENSURE THE CORRECT POSITION OF THE PLANTS IN RELATION TO THE WATER DEPTH.
- TYPICAL WATER LEVELS SHALL BE MAINTAINED DURING THE FIRST SIX (6) MONTHS OF THE PERIOD OF ESTABLISHMENT OR AS DIRECTED.
- PROTECTION FROM WATERFOWL DURING PERIOD OF ESTABLISHMENT SHALL BE REQUIRED.
- PLANTS SHALL BE FIRMLY EMBEDDED IN THE SOIL TO HELP PREVENT UPROOTING BY WAVES, WIND OR WILDLIFE.
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- CONTRACTOR SHALL INSTALL VEGETATION PROTECTION BARRIER PRIOR TO COMMENCING CLEARING AND GRADING ACTIVITIES AND SHALL NOT ENTER THE PROTECTED SITE DURING CONSTRUCTION.
- PROTECT ALL EXISTING TREES AND SHRUBS OUTSIDE OF THE CLEARING AND GRADING LIMITS. TRAVEL OVER THE ROOT SYSTEMS SHALL BE AVOIDED BY VEHICULAR AND HEAVY EQUIPMENT. NO MOTORIZED VEHICLE SHALL BE LEFT IDLING UNDER A TREE CANOPY.

RETENTION BASIN (DA1) GRADING AND LANDSCAPING



SCALE

Revisions	Date	Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business	McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607)723-9421 FAX (607)723-4979 www.mjinc.com	Drawing Title RETENTION BASIN (DA1) GRADING AND LANDSCAPING	Project Title LEBANON VA Medical Center STORMWATER STUDY	Project Number VA PROJ. NO. 595-11-133 Building Number(s) Drawing Number CG-1 Dwn. 10 of 16
4/20/2012	LCD	AEB				

LEGEND

525

Existing Contour

Existing Edge of Pave

Property Line

Existing Sanitary Line

Existing Water Line

Abandoned Water Line

Existing Gas Line

Abandoned Gas Line

Existing Telephone Duct

Ex. Energy Management
System Conduit

Old Electric Lines/Manholes

Existing Electric Lines

Existing Light Cable

Existing Steam Line

Abandoned Steam Line

Existing Duct Bank 13200 Volt

Direct Burial 13200 Volt

Abandoned Direct Burial 13200 V.

Existing Pipe to be
Removed and Replaced

New S.L.C.P.P.

New Catch Basin

New Drainage Manhole

Pavement Restoration

Grass Restoration

New Curb

Proposed Contour

Turf Reinforced Mats

Riprap Apron

QUANTITY

PLANT MATERIAL

PLANTING KEY

DECIDUOUS TREE

DECIDUOUS SHRUB

POND PLANTING

PLANTING SCHEDULE

KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
ZONE 1 - OPEN WATER (1'-6" WATER DEPTH)						
NO	388	NYMPHAEA ODOBRATA	WHITE WATERLILY	#1 CONT	-	24" O.C.
PN	92	POTAMOGETON NODOSUS	LONG-LEAVED POND PLANT	#1 CONT	-	48" O.C.
PP	67	POTAMOGETON PECTINATUS	SAGO PONDWEED	#1 CONT	-	48" O.C.
VA	34	Vallisneria spiralis	WILD CELERY	#1 CONT	-	48" O.C.
ZONE 2 - AQUATIC BENCH (6'-12" WATER DEPTH)						
PC	184	PONTEDERIA CORDATA	PICKERELWEED	#1 CONT	-	24" O.C.
SA	201	SAURURUS ACUTUS	HARD-STEM BULRUSH	CLUMP	10" SQUAT	24" O.C.
SC	63	SAURURUS CERNUUS	LIZARDS TAIL	CLUMP	10" SQUAT	48" O.C.
SE	56	SPARGANIUM EURYCARPUM	GIANT BUR-REED	CLUMP	10" SQUAT	48" O.C.
SL	85	SAGITTARIA LATIFOLIA	DUCK POTATO	CLUMP	10" SQUAT	48" O.C.
ST	59	SCIRPUS TABERMONTANII	SOFT-STEM BULRUSH	CLUMP	10" SQUAT	48" O.C.

PLANTING SCHEDULE (CON'T)

KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
ZONE 3 - LOW MARSH (0'-6" WATER DEPTH)						
AI	650	ASCELEPSIS INCARNATA	SWAMP MILKWEED	CONT	2" CELL	12" O.C.
AL	4	ALNUS INCANA RUROSA	SPECKLED ALDER	B&B	1 1/2" CAL	SPECIMEN
CO	18	CEPHALANTHUS OCCIDENTALIS	COMMON BUTTONBUSH	#3 CONT	18" HT	
CV	757	CAREX VULPINOIDEA	FOX SEDGE	CLUMP	10" SQUAT	12" O.C.
IV	1,778	IRIS VERSICOLOR	BLUE FLAG IRIS	#1 CONT	-	12" O.C.
LO	472	LEERSIA ORYZOIDES	RICE CUTGRASS	CLUMP	10" SQUAT	24" O.C.

PLANTING SCHEDULE (CON'T)

KEY	QUANT.	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
ZONE 4 - HIGH MARSH, ZONE 5 - FLOODPLAIN TERRACE, AND ZONE 6 - UPLAND						
AC	12	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	B&B	8" HT	MULTI-STEM
AR	10	ACER RUBRUM	RED MAPLE	B&B	2" CAL	SPECIMEN
BN	6	BETULA NIGRA "HERITAGE"	HERITAGE RIVER BIRCH	B&B	2" CAL	SPECIMEN
CS	28	CORNUS SERICEA	REDTIG DOGWOOD	#3 CONT	24" HT	48" O.C.
PD	2	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	B&B	2" CAL	SPECIMEN
SD	2	SAUX DISCOLOR	PUSSY WILLOW	B&B	2" CAL	SPECIMEN
SN	10	SALIX NIGRA	BLACK WILLOW	B&B	2" CAL	SPECIMEN

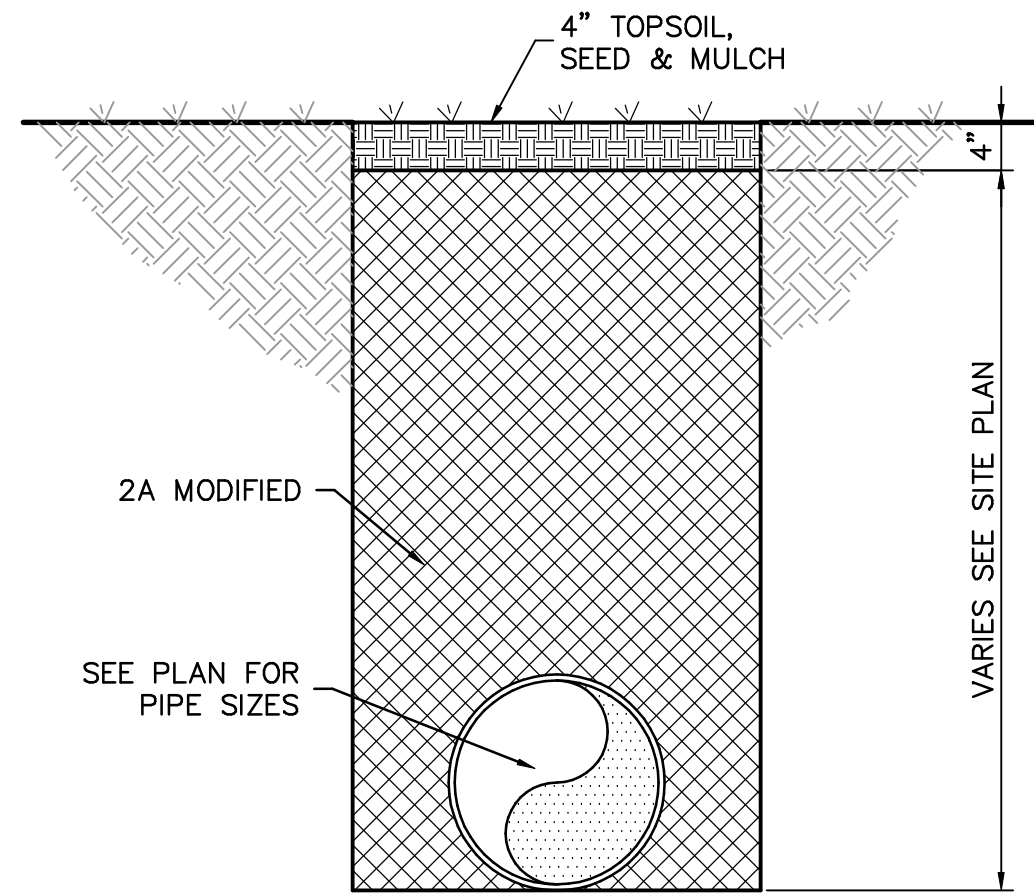
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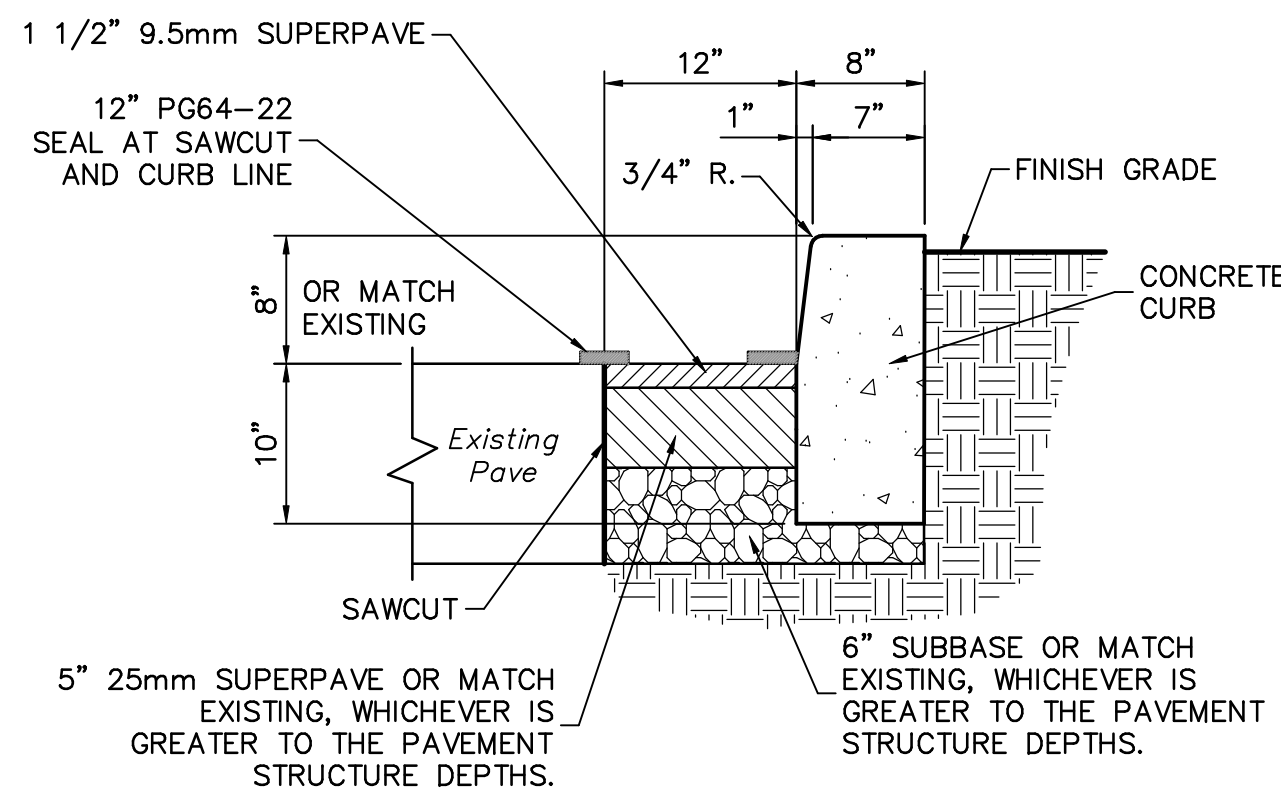
RETENTION BASIN (DA2) GRADING AND LANDSCAPING

0 30 60 120 FT
SCALE

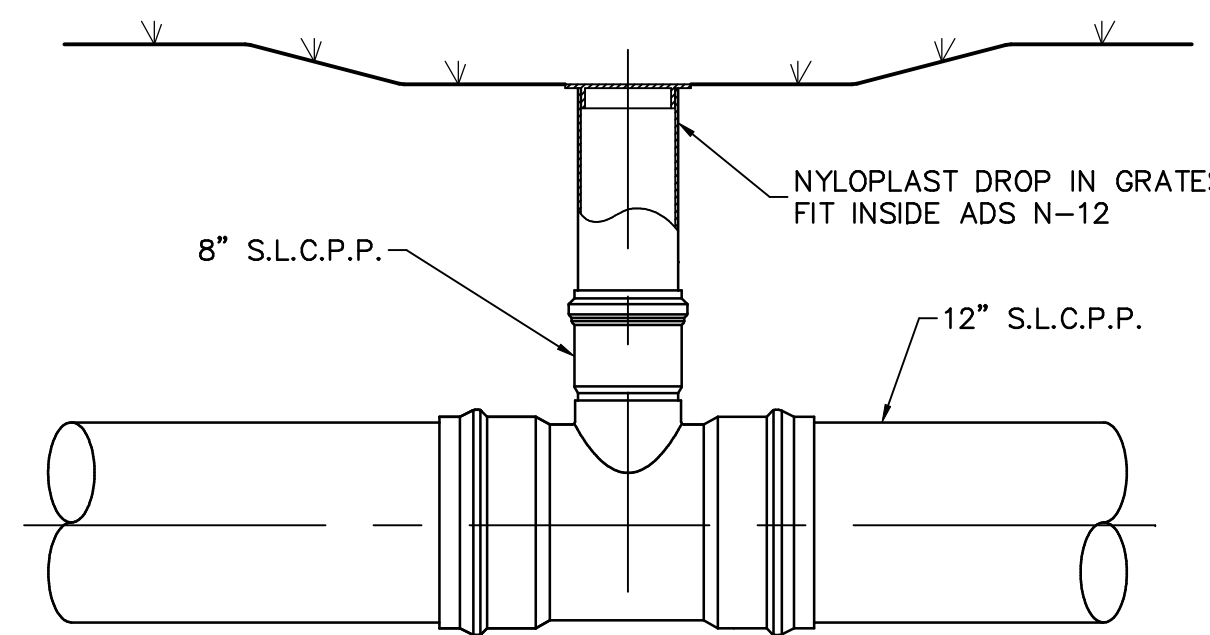
Revisions	Date	Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business	McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607)723-9421 FAX (607)723-4979 www.mjinc.com	Drawing Title RETENTION BASIN (DA2) GRADING AND LANDSCAPING	Project Title LEBANON VA Medical Center STORMWATER STUDY	Project Number VA PROJ. NO. 595-11-133 Building Number(s) Drawing Number CG-2 Dwn. 11 of 16
					Location Lebanon, PA	Date 4/20/2012
					Checked LCD	Drawn AEB



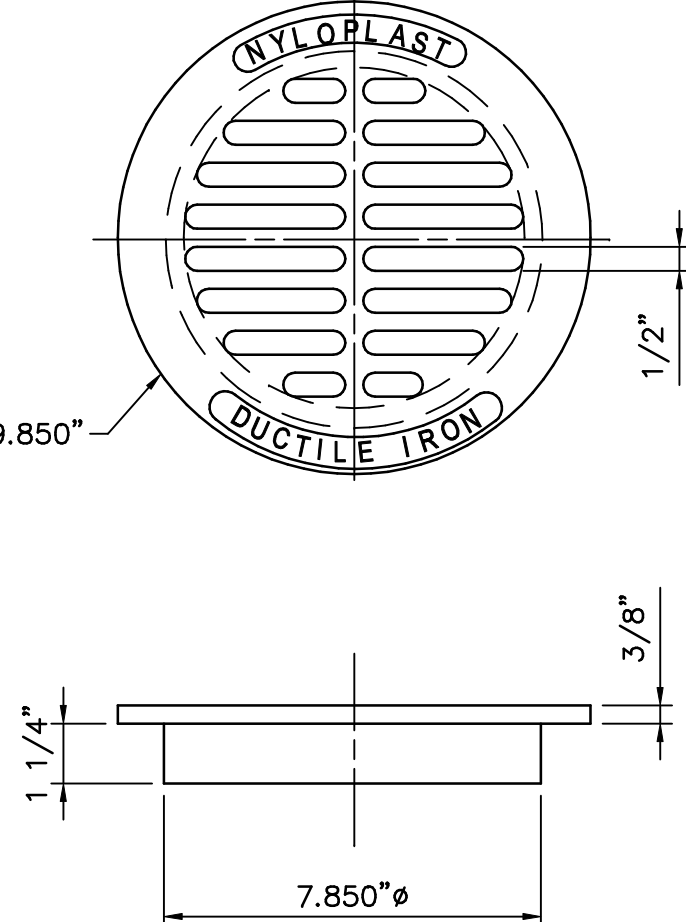
STORM PIPE TRENCH
N.T.S.



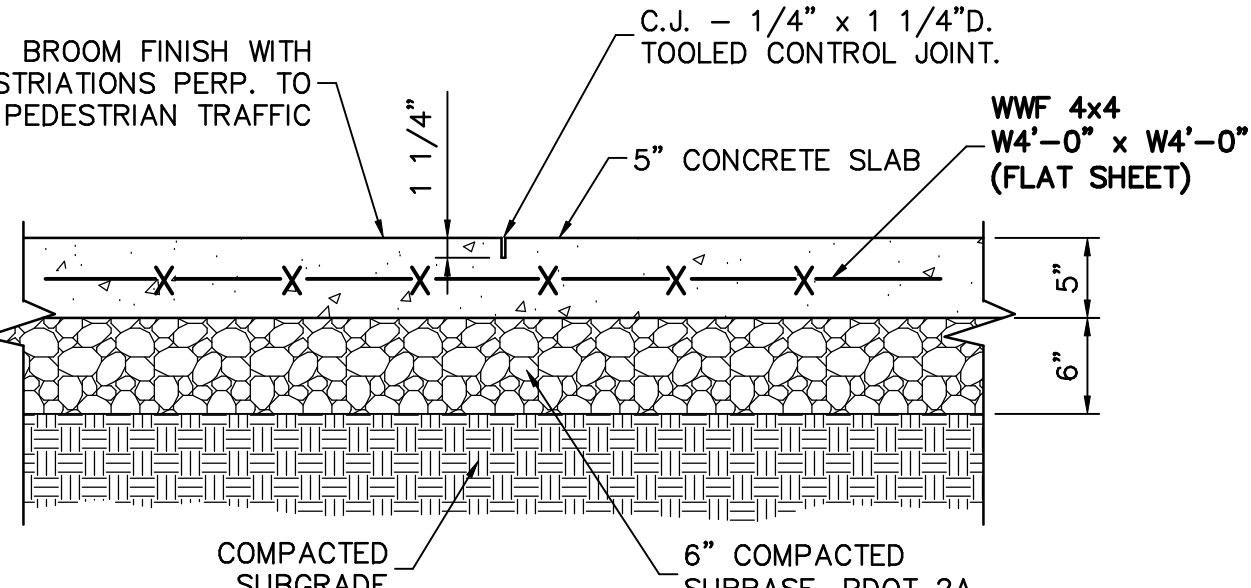
PAVEMENT RESTORATION FOR CURB PLACEMENT
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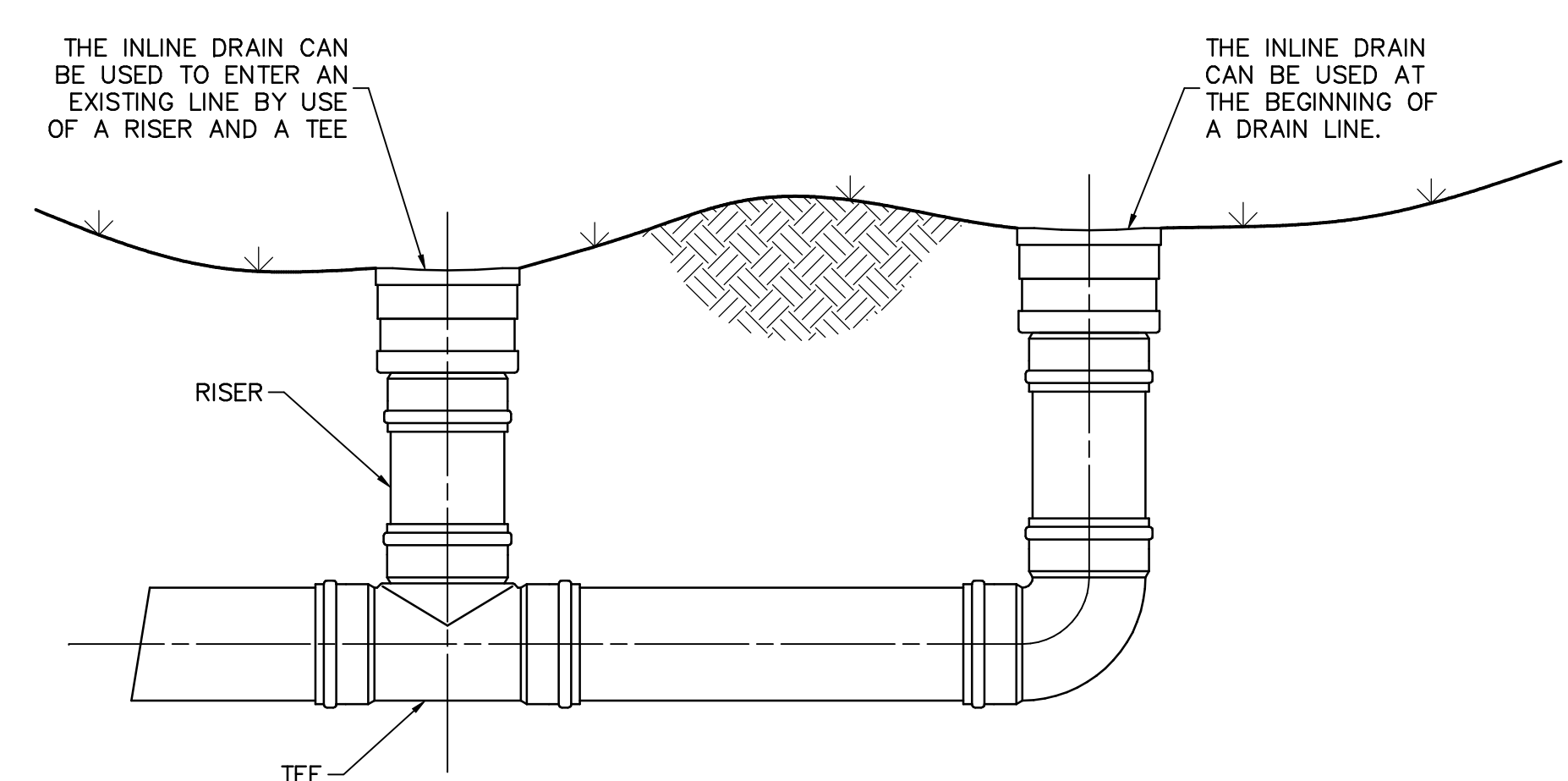
8" DROP IN INSTALLATION DETAIL
NOT TO SCALE



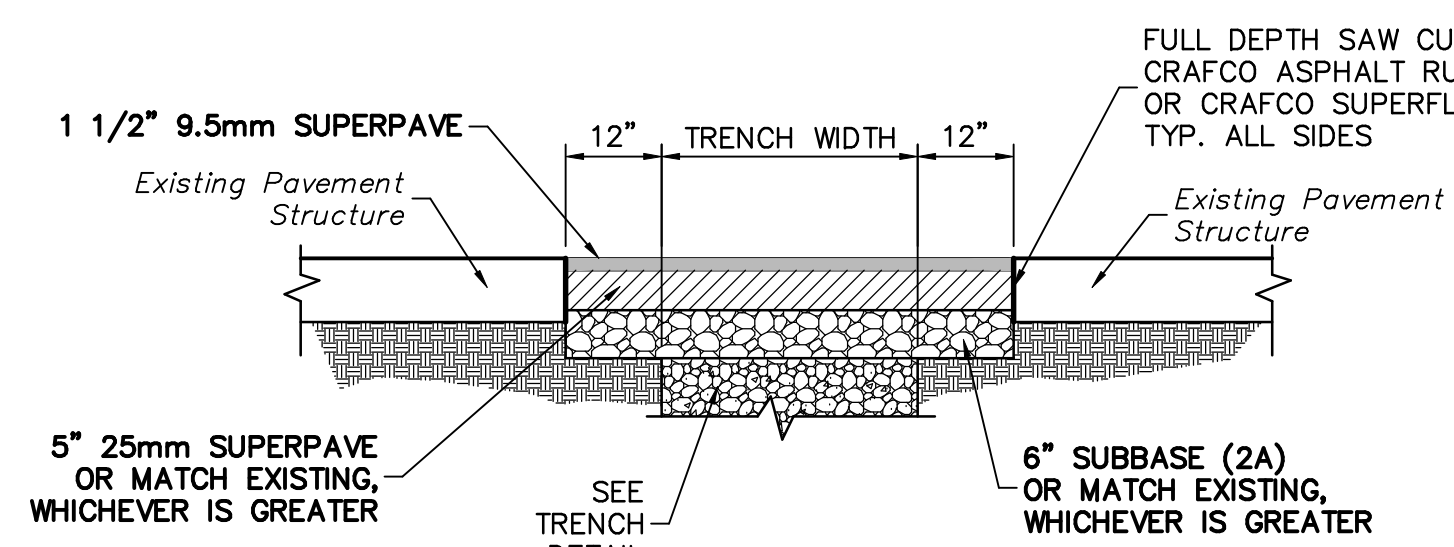
8" DROP IN GRATE/COVER DETAIL
NOT TO SCALE



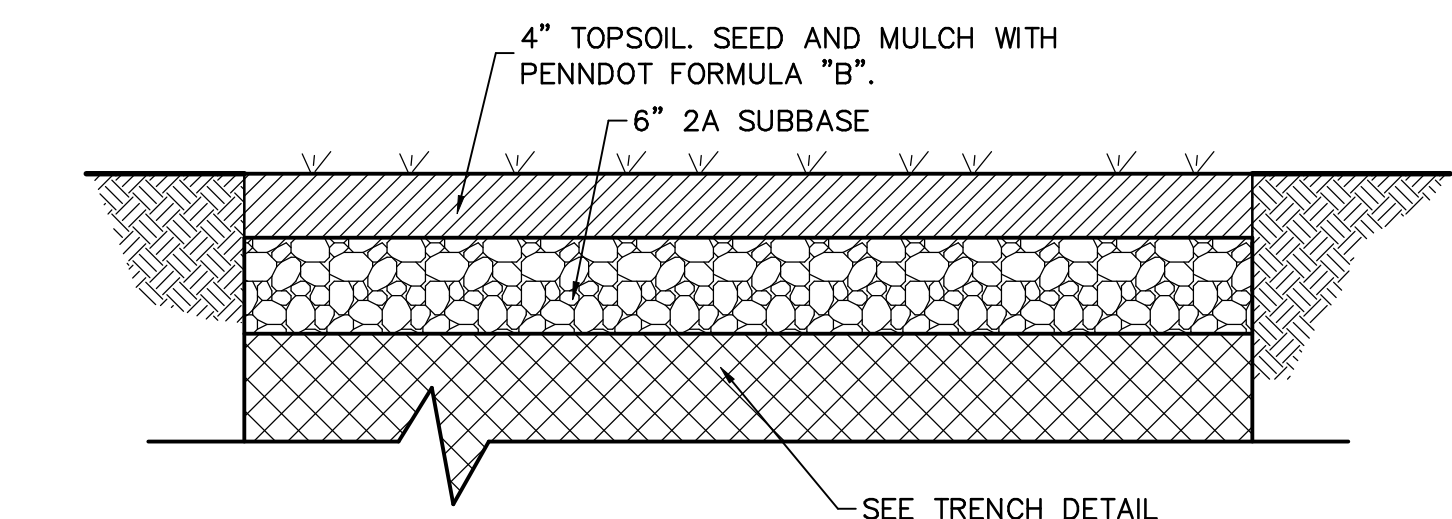
CONCRETE WALK DETAIL
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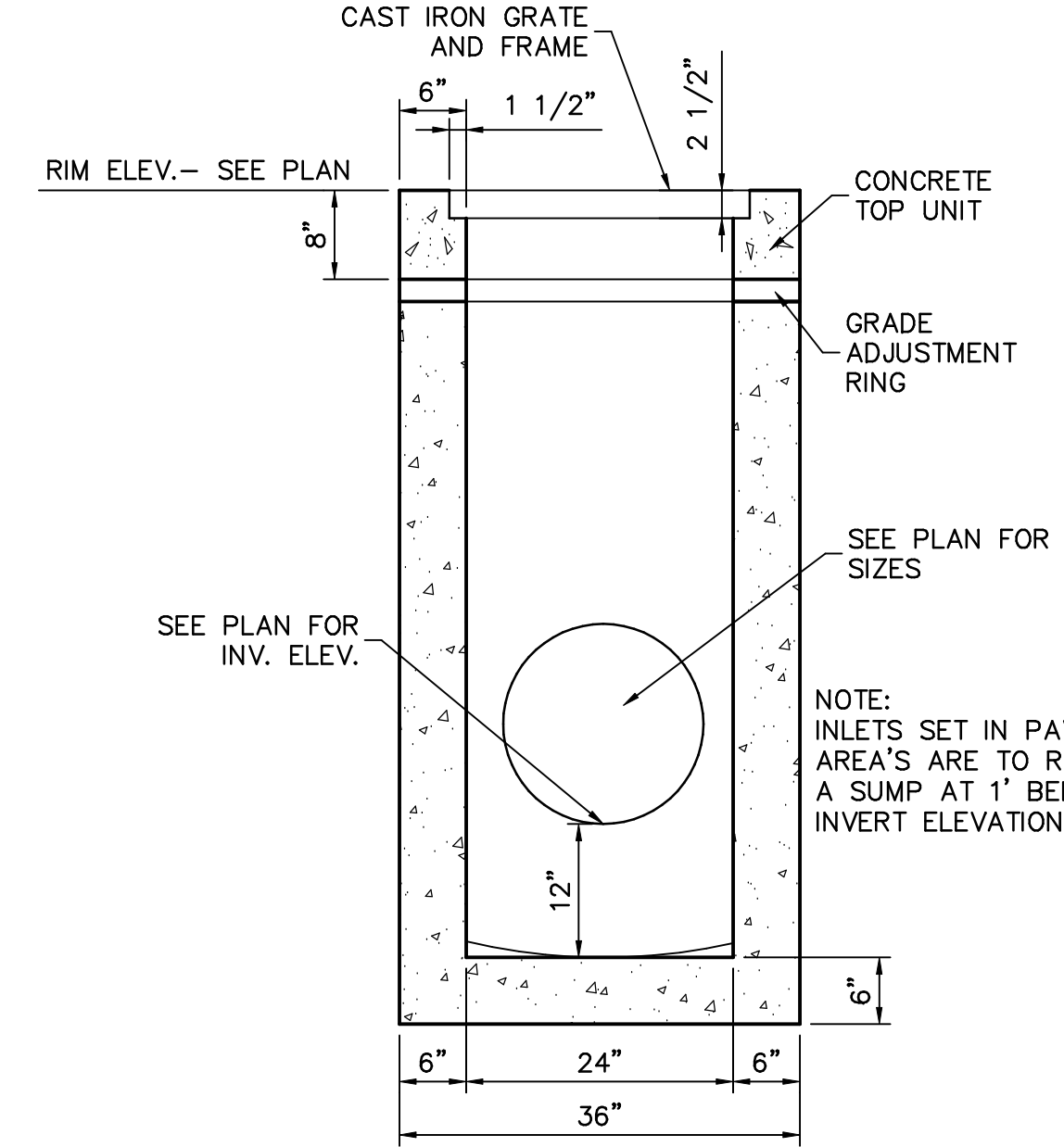
8" INLINE DRAIN DETAIL
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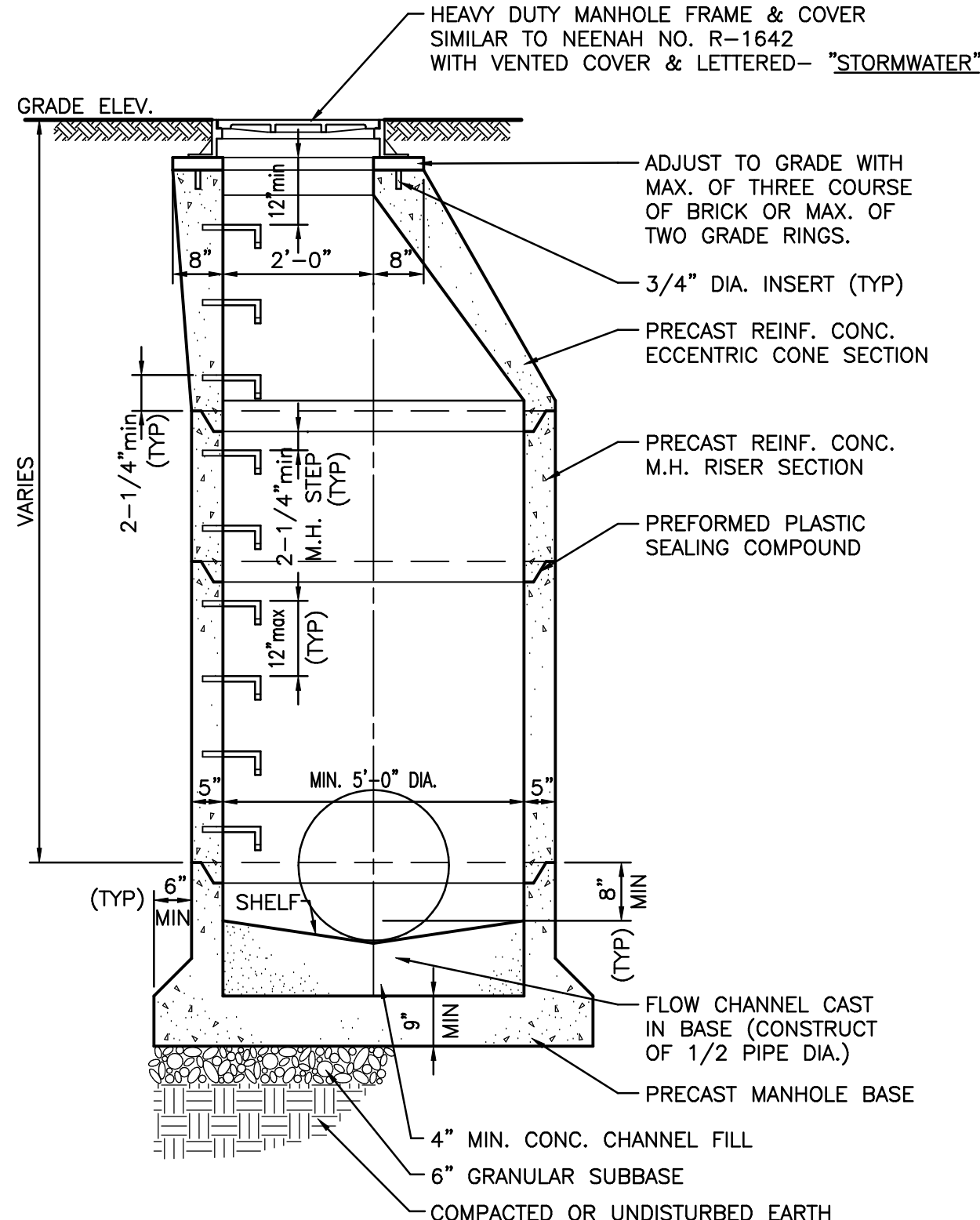
PAVEMENT RESTORATION DETAIL
SCALE: 1/2" = 1'-0"



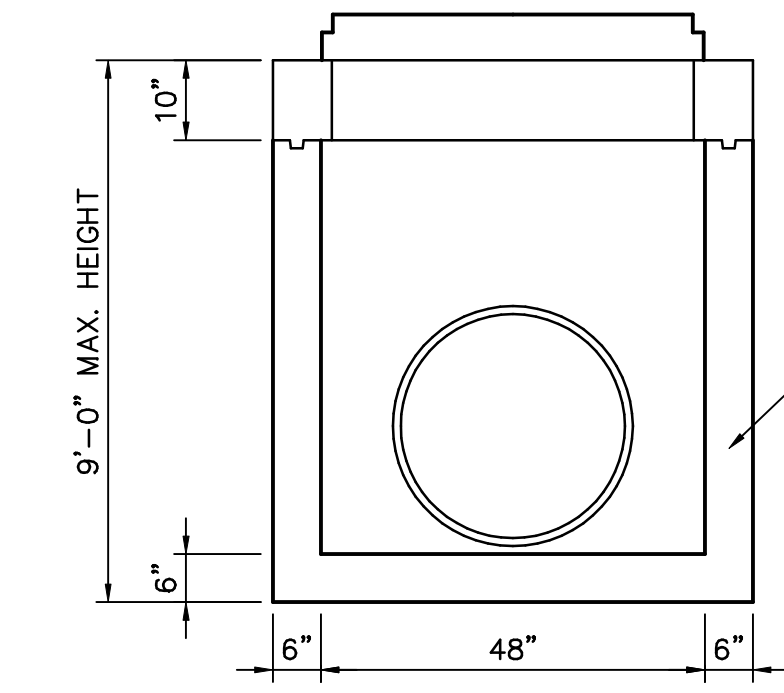
LAWN RESTORATION DETAIL
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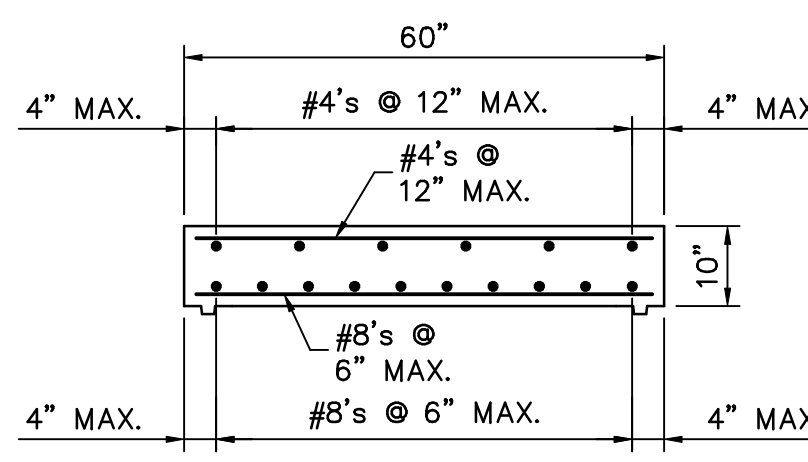
TYPE M INLET BOX DETAIL
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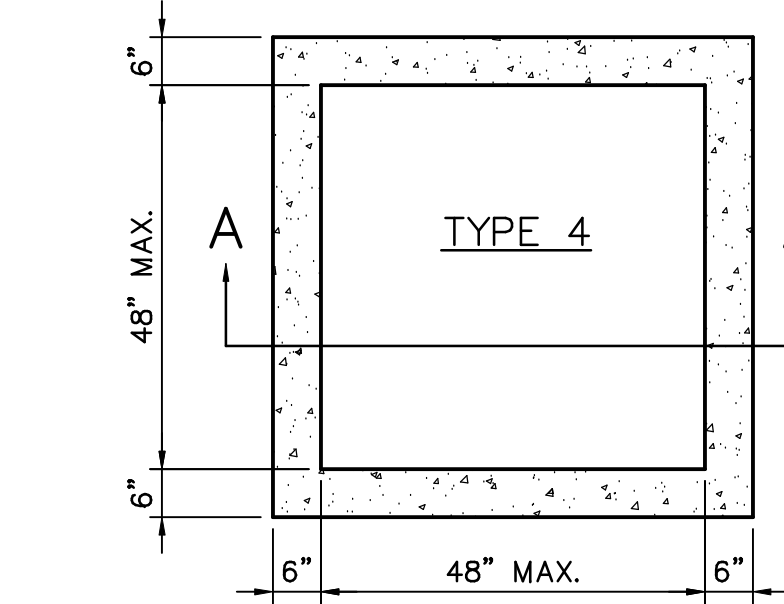
TYPICAL STORM MANHOLE DETAIL
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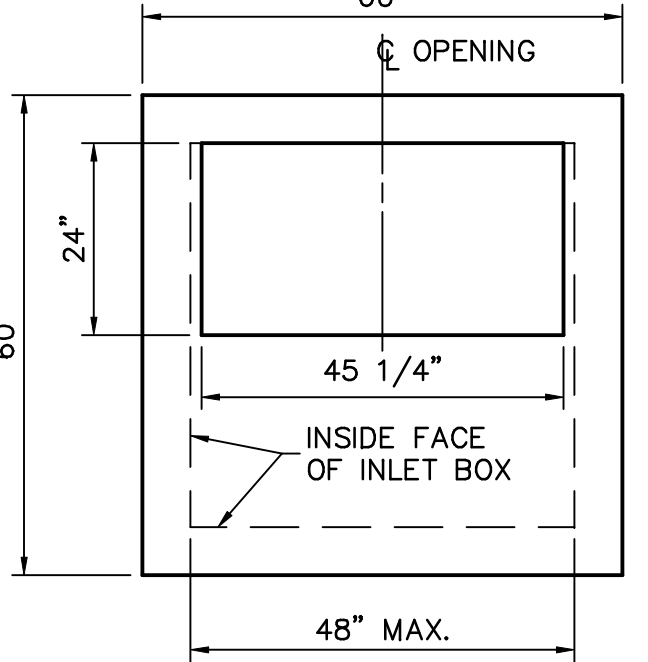
SECTION A-A



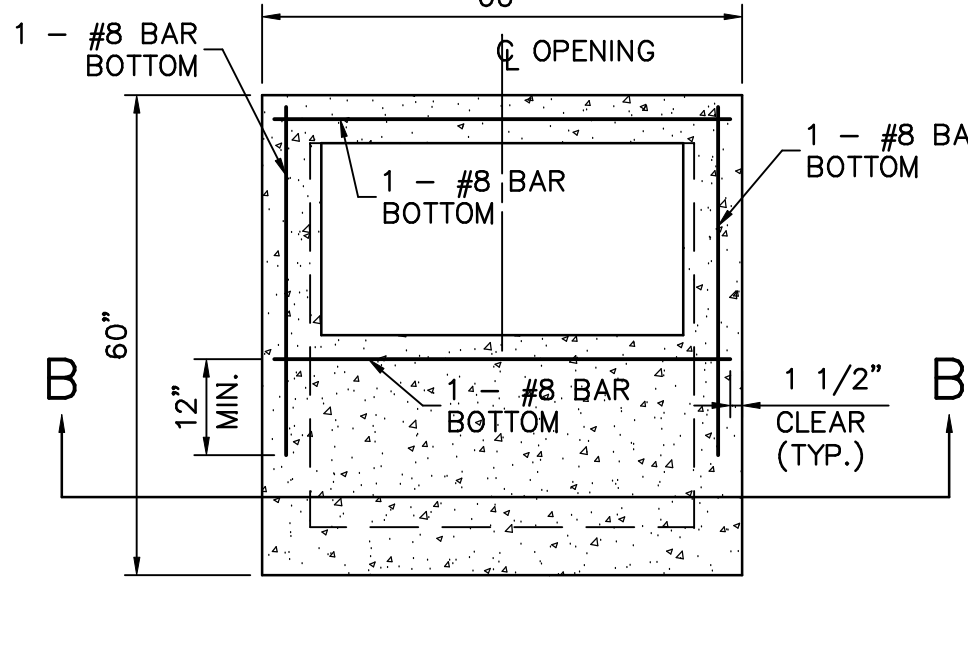
SECTION B-B



PLAN VIEW - INLET BOX

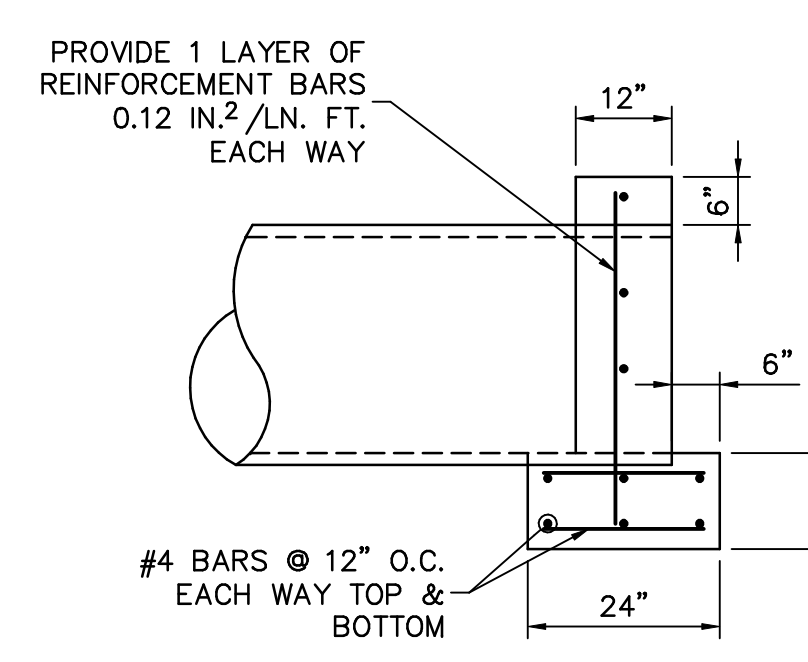


INLET BOX TOP SLAB

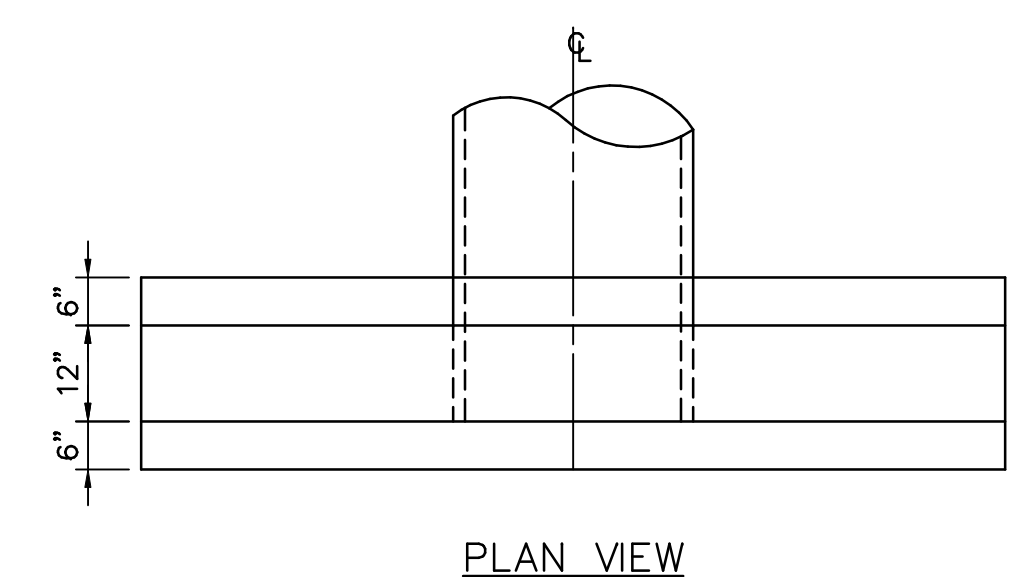


TOP SLAB REINFORCING

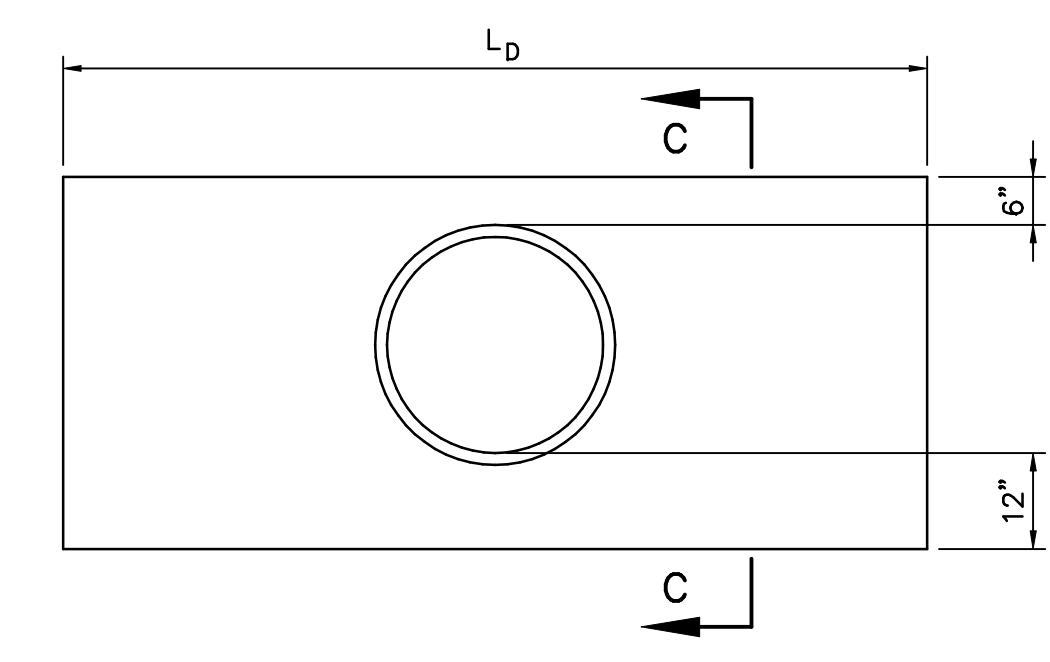
PIPE DIAMETER	L _D
18" and 21"	5'
24" and 27"	7'
30" and 33"	9'
36" and 39"	10'
42" and 45"	11'
48" and 51"	12'



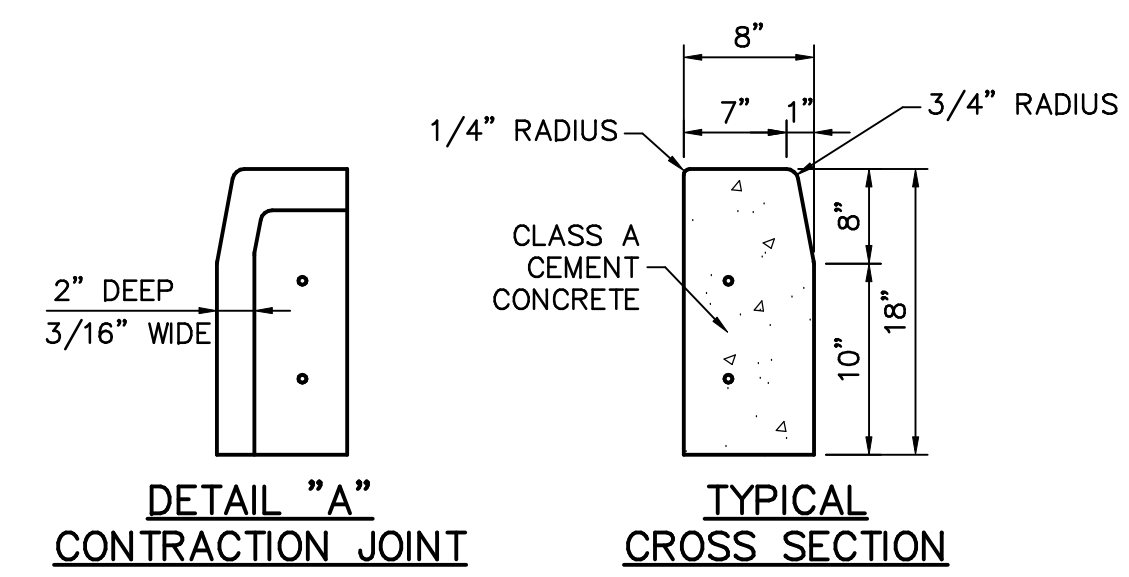
SECTION C-C



PLAN VIEW

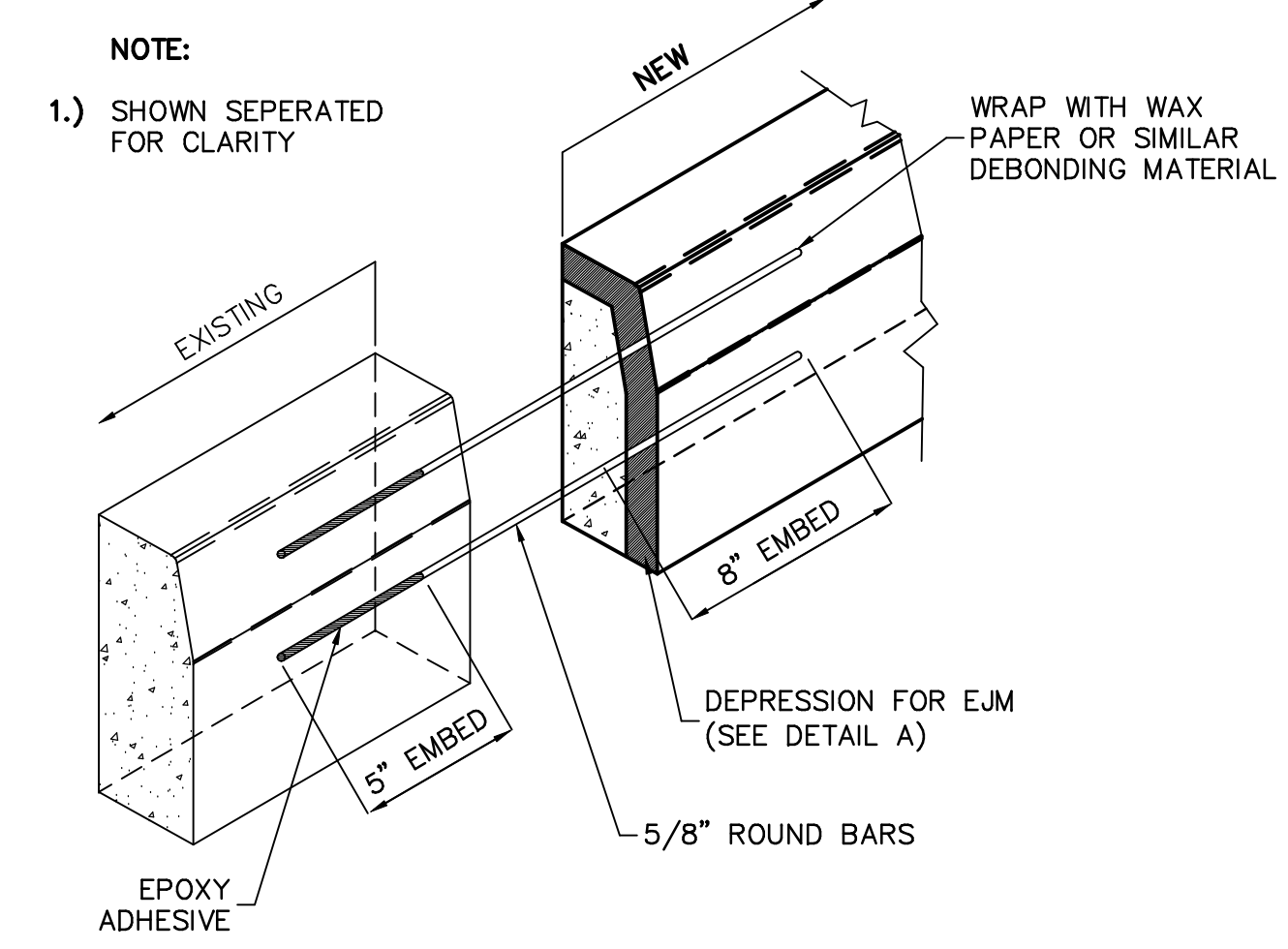


FRONT ELEVATION VIEW



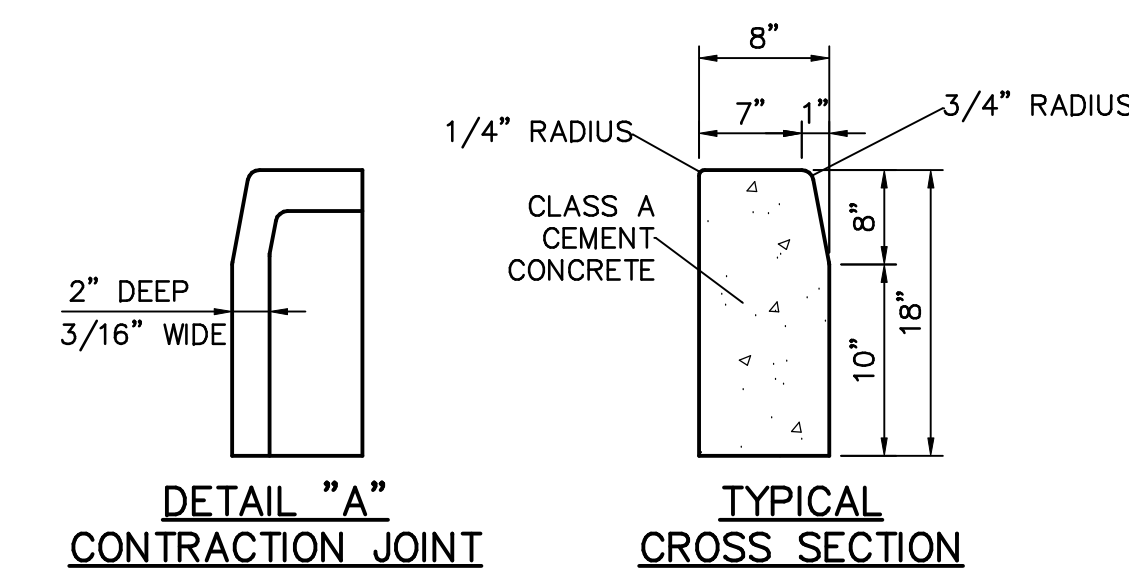
DETAIL "A" CONTRACTION JOINT

TYPICAL CROSS SECTION



CONCRETE CURB DETAIL
NOT TO SCALE

- GENERAL NOTES:**
- TOPOGRAPHY IS BASED ON AERIAL MAPPING PREPARED BY AEROCON BASED ON GROUND CONTROL SURVEY CONDUCTED BY KBA. CONTRACTOR CAN REQUEST ANY ADDITIONAL TOPOGRAPHY BEYOND THAT SHOWN ON THE DRAWINGS AND WITHIN THE LIMITS OF THE V.A. PROPERTY BY CONTACTING KBA AND MAKING A REQUEST. THE AERIAL MAPPING IS DATED NOVEMBER 18, 2011. THE TOPOGRAPHIC MAPPING REPRESENTS THE SURFACE FEATURES OF THE LAND AS OF THIS DATE.
 - LOCATIONS OF EXISTING UTILITIES ARE BASED ON RECORDS PROVIDED TO THE A/E BY THE LEBANON VA MEDICAL CENTER AND VISUAL OBSERVATIONS OF THE SURFACE. THE LOCATIONS ARE BELIEVED TO BE REASONABLY ACCURATE. HOWEVER, THE COMPLETENESS AND/OR ACCURACIES ARE NOT GUARANTEED. THE CONTRACTOR MUST VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES PRIOR TO THE START OF ANY WORK.
 - PRIOR TO STARTING CONSTRUCTION ALL UTILITY SERVICES IN THE AREA ARE TO BE LOCATED, THE VA NOTIFIED AND LINE TO REMAIN ACTIVE/FUNCTIONAL SHALL BE PROTECTED IN ACCORDANCE WITH VA STANDARDS.
 - UTILIZE INLET PROTECTION MEASURES AS NEEDED TO PREVENT STONES, DEBRIS AND SEDIMENT LADEN WATER FROM ENTERING NEW CATCH BASINS SHOWN ON DRAWINGS. ANY OBSTRUCTIONS WILL BE CLEANED FROM THE PIPE BEFORE PROJECT COMPLETION.
 - THE INTERFACE BETWEEN THE NEW PAVED AREAS AND EXISTING PAVEMENT SHALL BE MAE BY SAWCUTTING THE EXISTING ASPHALT. SEAL THE PAVEMENT MATING SEAM.
 - DO NOT SCALE THESE DRAWINGS FOR EXACT DIMENSIONS. VERIFY ALL CONDITIONS, DIMENSIONS, ETC. AT THE JOB SITE.
 - ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION. ANY DEFECTS IN WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND ANY DEFECTIVE MATERIAL REPLACED AT NO ADDITIONAL COST.
 - THE V.A. RESERVES THE RIGHT TO DESIGNATE THE ORDER IN WHICH THE CONTRACTOR SHALL PROCEED WITH ANY AND ALL PORTIONS OF THE WORK. WORK SHALL BE COORDINATED SO AS NOT TO INTERFERE WITH THE BUSINESS OF THE MEDICAL CENTER. NO ADDITIONAL WORK SHALL BE STARTED WITHOUT THE APPROVAL OF THE COTR.
 - KEEP NOISE AND DUST TO A PRACTICAL MINIMUM. BARE DISTURBED SOILS SHALL BE WETTED DOWN AS REQUIRED TO KEEP FUGITIVE DUST TO A MINIMUM.
 - ALL CONTRACTOR EMPLOYEES AND THOSE VISITING THE SITE ON BEHALF OF THE CONTRACTOR WILL BE REQUIRED TO OBSERVE THE V.A. SECURITY REGULATIONS AND MUST BE IDENTIFIED BY PROPER CREDENTIALS FURNISHED BY THE V.A.
 - ALL WORK WILL BE COMPLETED DURING NORMAL MEDICAL CENTER WORKING HOURS. NORMAL MEDICAL CENTER WORKING HOURS ARE FROM 8:00 A.M. TO 4:30 P.M. MONDAY THROUGH FRIDAY LOCAL TIME. WORK OUTSIDE THESE DAYS AND TIMES MUST RECEIVE PRIOR APPROVAL OF V.A. REPRESENTATIVE.
 - CONTRACTOR SHALL PROVIDE CONSTRUCTION FENCING TO ENCLOSE EACH WORK AREA.
 - ALL CONSTRUCTION ACTIVITIES SHALL BE FENCED IN. FENCING SHALL BE CHAIN LINK TYPE WITH MOVABLE POSTS TYPICALLY SECURED AT THE BASE WITH SANDBAGS OR SIMILAR.
 - ANY PIPE INSTALLATION OR SIMILAR CONSTRUCTION WORK CROSSING A MEDICAL CENTER ROAD WILL BE COMPLETED DURING NON-TRADITIONAL OR WEEKEND HOURS.
 - TEMPORARY FENCING WILL BE REQUIRED AROUND ALL WORK AREAS EXCEPT AT ROADWAY CROSSINGS.



DETAIL "A" CONTRACTION JOINT

TYPICAL CROSS SECTION

(PER RC-64M, 06/01/2010)
PLAIN CEMENT CONCRETE CURB
NOT TO SCALE

<p>Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business</p>		<p>McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607) 723-9421 FAX (607) 723-4979 www.mjinc.com</p>		<p>Drawing Title SITE DETAILS</p>		<p>Project Title LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS</p>		<p>Project Number VA PROJ. NO. 595-11-133</p>	
<p>Revisions</p>		<p>Date</p>		<p>Location Lebanon, PA</p>		<p>Date 04-20-12</p>		<p>Checked DK</p>	
<p>4114D010</p>		<p>PER RC-31M, JUNE 1, 2010 TYPE D ENDWALL NOT TO SCALE SW-00004</p>		<p>Drawn LB</p>		<p>Drawing Number D-1</p>		<p>Dwa. 12 of 16</p>	

GENERAL NOTES

GENERAL DESCRIPTION

1. THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) OF THE COMMONWEALTH OF PENNSYLVANIA REQUIRES THE PREPARATION AND IMPLEMENTATION OF A PLAN FOR THE PREVENTION OF ACCELERATED SOIL EROSION AND SEDIMENTATION OF THE STREAMS OF THE COMMONWEALTH UNDER TITLE 25, CHAPTER 102 OF THEIR REGULATIONS. SUCH PLANS ARE REQUIRED FOR ALL EARTHMOVING ACTIVITIES AND IT IS INTENDED THAT THIS PLAN WILL FULFILL THIS DEP REQUIREMENT AND PREVENT SEDIMENTATION.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT THIS PLAN IN THE FIELD AND MEET ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR SHALL ASSIGN THIS RESPONSIBILITY TO A PERSON EXPERIENCED IN SEDIMENT AND EROSION CONTROL PROCEDURES. MODIFICATIONS OR DEVIATIONS FROM THIS PLAN WILL BE ALLOWED ONLY IF THE CONTRACTOR FIRST OBTAINS WRITTEN APPROVAL FROM DEP.

APPLICABLE STANDARDS

SOIL EROSION AND SEDIMENTATION CONTROL MANUAL:

1. PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

STANDARD CONDITIONS RELATING TO DEP WATER QUALITY MANAGEMENT PERMITS

THE CONTRACTOR SHALL FAMILIARIZE HIMSELF AND SHALL BE RESPONSIBLE FOR CARRYING OUT ALL REQUIREMENTS STATED IN THE STANDARD CONDITIONS RELATING TO EROSION CONTROL WHICH ARE ATTACHED TO THE DEP WATER MANAGEMENT PERMIT ISSUED THE OWNER FOR THE CONSTRUCTION OF THIS PROJECT.

PRODUCTS

ALL PRODUCTS AND MATERIALS SHALL MEET THE REQUIREMENTS OF THE LOCAL CONSERVATION DISTRICT OR AS SPECIFIED ELSEWHERE IN THESE SPECIFICATIONS.

PROJECT DESCRIPTION

1. THE PROJECT IS LOCATED ON THE VA LEBANON CAMPUS OFF STATE DRIVE. THE PROJECT WILL INVOLVE THE UPGRADING OF EXISTING STORMWATER FACILITIES AND PLACEMENT OF BIO RETENTION PONDS WITH PLANTINGS.

2. THIS PROJECT INCLUDES AN EROSION AND SEDIMENT POLLUTION CONTROL PLAN.

3. THE PROPOSED EROSION AND SEDIMENT POLLUTION CONTROL PLAN HAS BEEN DESIGNED TO PREVENT THE LOSS OF SOIL COVER DURING THE SITE CONSTRUCTION AND DEVELOPMENT PHASE OF THIS PROJECT. THE PLAN INCLUDES A SEQUENCE OF CONSTRUCTION ACTIVITIES, TEMPORARY AND PERMANENT EROSION CONTROL MEASURES, AND A MAINTENANCE PLAN TO INSURE THE PROPER OPERATION OF THE TEMPORARY AND PERMANENT CONTROLS PROPOSED FOR THIS PROJECT.

4. CONSTRUCTION OF THIS PROJECT IS SCHEDULED TO BEGIN IN AUGUST, 2012 WITH COMPLETION PLANNED FOR NOVEMBER, 2012. THE SEQUENCING OF CONSTRUCTION ACTIVITIES PROVIDES THAT AS AREAS ARE BROUGHT TO PROPOSED GRADE, FINAL SOIL STABILIZATION MEASURES WILL BE INITIATED, THROUGHOUT THE DURATION OF THE PROJECT, CONSTRUCTION AREAS LEFT EXPOSED WILL BE SEEDED AND MULCHED IMMEDIATELY.

5. RECEIVING WATERSHED IS A TRIBUTARY TO SNITZ CREEK; CHAPTER 93 RECEIVING WATER CLASSIFICATION IS "CWF" COLD WATER FISH.

6. ANY AND ALL WASTE FROM THIS PROJECT WILL BE DISPOSED OF PER D.E.P. SOLID WASTE REGULATIONS.

TOPOGRAPHIC FEATURES OF THE AREA

THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN DESCRIBES THE PROJECT AREA, CONTOURS AT 2 FOOT INTERVALS ARE SHOWN ON THE PLAN AS WELL AS PROPERTY BOUNDARY LINES AND OTHER PHYSICAL FEATURES. SOIL TYPES ARE ALSO INDICATED IN THIS REPORT.

DESIGN CRITERIA

THE METHOD USED IN DESIGNING SEDIMENT CONTROL MEASURE WAS TAKEN FROM EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL DATED 2000.

STAGE OF CONSTRUCTION ACTIVITIES

1. WORK AREAS ARE DESIGNATED ON DRAWING SP-1.

2. THE BIO-RETENTION PONDS CAN BE CONSTRUCTED SIMULTANEOUSLY OR SEQUENTIALLY AT THE CONTRACTORS OPTION.

3. THE SWALE LEADING TO BIO-RETENTION POND NO. 1 SHALL BE DONE CONCURRENTLY WITH THE POND.

4. THERE ARE FOUR LOCATIONS OF STORMWATER PIPING SYSTEM REPLACEMENT. THESE LOCATIONS ARE IN WORK AREA NO. 1 AND ARE EACH IN WORK AREA'S NO. 1 AND NO. 3. THESE FOUR LOCATIONS MUST BE COMPLETED SEQUENTIALLY. THE ORDER IN WHICH THE CONSTRUCTION IS SEQUENCED SHALL BE APPROVED BY THE V.A. ONE LOCATION MUST BE COMPLETED BEFORE WORK ON THE NEXT LOCATION COMMENCES.

5. ANY WORK THAT AFFECTS THE MAIN ACCESS DRIVE OFF STATE ROAD OR THE CAMPUS LOOP ROAD MUST BE DONE IN NON-TRADITIONAL WEEKDAY HOURS OR ON THE WEEKEND. ONE LANE MUST BE ACCESSIBLE FOR PASSAGE AT ALL TIMES.

TEMPORARY CONTROL MEASURES

1. ALL TEMPORARY MEASURES IN THIS PLAN ARE TO BE USED TO MINIMIZE EROSION OF THE CONSTRUCTION AREAS AND TO REDUCE SILTATION DOWNSTREAM FROM THE WORK AREAS.

2. AREAS DISTURBED BY CONSTRUCTION WHICH CANNOT BE BROUGHT TO FINAL GRADE WILL BE IMMEDIATELY STABILIZED USING A TEMPORARY COVER.

3. THIS TEMPORARY COVER IS TO BE AN ANNUAL RYE GRASS SEEDED AT THE RATE OF 50 POUNDS PER ACRE AND MULCHED WITH HAY OR STRAW AT THE RATE OF 3 TONS PER ACRE.

MAINTENANCE PROGRAM

1. MAINTENANCE OF BOTH THE TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IS NECESSARY TO MAINTAIN THEIR EFFECTIVENESS. THE FILTER FABRIC IS TO BE CHECKED AFTER EACH RUNOFF FOR STRUCTURAL PROBLEMS AND SILTATION. BARRIERS SHOULD BE CLEARED WHEN THE DEPTH OF SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE BARRIER.

2. AREAS WHERE PERMANENT VEGETATION HAS BEEN INSTALLED MUST BE CHECKED MONTHLY THROUGH THE GROWING SEASON TO INSURE THAT AN ADEQUATE STAND IS DEVELOPING. MAINTENANCE COULD INCLUDE RESEEDING, REMULCHING, AND MATTING OF POORLY DEVELOPED SECTION.

3. ALL AREAS THAT REQUIRE STONE PROTECTION TO REDUCE EROSION SHOULD BE CHECKED AFTER EACH RUNOFF. AREAS WHERE STONE HAS BEEN DISPLACED OF DISLODGED FROM ITS ORIGINAL POSITION SHOULD BE REPLACED WITHIN A WEEK BETWEEN THE TIME OF THE EVENT AND THE TIME OF RESTORATION.

4. ANY AREAS TO BE SEEDED, THAT CANNOT BE SEEDED BY NOVEMBER 15TH WILL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 3.0 TONS PER ACRE AND ALL INTERIM EROSION AND SEDIMENT POLLUTION CONTROLS SHALL BE MAINTAINED UNTIL THE FOLLOWING SUITABLE SEEDING SEASON. ALL AREAS MUST HAVE ALL CONTROLS MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED.

STABILIZED ROCK ENTRANCE ROAD PAD

1. CONSTRUCT STABILIZED CONSTRUCTION PADS AT THE LOCATIONS SHOWN ON THE PLANS, AND/OR DESIGNATED IN THE SEQUENCE OF CONSTRUCTION ACTIVITIES.

2. EXCAVATE THE AREA SHOWN ON THE PLANS TO A DEPTH OF 6" AT THE ENTRANCE POINT TO THE CONSTRUCTION AREA. REMOVE EXCAVATED MATERIAL AND TRANSPORT TO A PREPARED SUBGRADE.

3. PLACE A BARRIER MAT OF CLASS 4 GEOTEXTILE ON THE PREPARED SUBGRADE.

4. PROVIDE A SIX INCH DEPTH OF 3 INCH DIAMETER ROCK.

5. PERIODICALLY INSPECT THE ROCK TO DETERMINE WHETHER CLOGGING OF MATERIAL HAS REDUCED THE EFFICIENCY OF THE STABILIZED CONSTRUCTION ENTRANCE PAD.

6. REPLACE ROCK MATERIAL WHEN MATERIAL DOES NOT ADEQUATELY REMOVE MUD FROM VEHICLE WHEELS. ALSO REMOVE SEDIMENT FROM LOCAL ROADWAY AS IT BECOMES VISIBLE.

INSTALLATION OF CLASS 4 GEOTEXTILE MATERIAL (S.Y.) (AS PER PG. 212, PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARD 408 AND APPLICABLE ROADWAY CONSTRUCTION DRAWINGS.)

TEMPORARY SEEDING

1. ALL AREAS TO BE PREPARED AND SEEDED ACCORDING TO THE FOLLOWING RATES. ANY AREA RECEIVING TEMPORARY SEEDING WHICH WILL BE LEFT FOR A PERIOD LONGER THAN ONE YEAR SHALL BE SEEDED WITH THE PERMANENT SEEDING MIXTURE.

A. FERTILIZER: FERTILIZE AT THE FOLLOWING RATES:
50 LB. OF N PER ACRE
50 LB. OF P205 PER ACRE
50 LB. OF K20 PER ACRE

B. LIME: AGRICULTURAL GRADE LIME AT RATE OF 1 TON PER ACRE.

C. SEED: SEED WEIGHTS GIVEN BELOW ARE PLS (PURE LIVE SEED)

1. FOR SPRING SEEDING (UP TO JUNE 15)
ANNUAL RYEGRASS 40 #/ACRE
OR WINTER RYE 168 #/ACRE
OR SPRING OATS PLUS
ANNUAL RYEGRASS 64 #/ACRE OATS
20 #/ACRE RYEGRASS

2. FOR LATE SPRING AND SUMMER SEEDING (JUNE 16 TO AUGUST 15)
SUDANGRASS 40 #/ACRE
OR ANNUAL RYEGRASS 40 #/AREA

3. FOR LATE SUMMER AND FALL (BEYOND AUGUST 15)
ANNUAL RYEGRASS 40 #/ACRE
OR WINTER RYE 168 #/ACRE
OR WINTER WHEAT 180 #/ACRE

D. MULCH: STRAW OR HAY AT RATE OF 3 TONS PER ACRE.

PERMANENT SEEDING

1. ALL AREAS TO BE SEEDED ACCORDING TO THE FOLLOWING RATES. MULCH IS TO BE USED AS NECESSARY FOR EROSION PROTECTION UNTIL SEEDING IS ESTABLISHED.

A. TOPSOIL: FREE OF SUBSOIL, CLAY OR IMPURITIES, PLANTS, WEEDS AND ROOTS: pH VALUE MINIMUM 5.4 AND MAXIMUM 7.0.

B. FERTILIZER: TYPE 1, GRADE A AS REQUIRED TO ELIMINATE ANY DEFICIENCIES OF TOPSOIL AS INDICATED BY SOIL ANALYSIS.
MINIMUM FERTILIZER APPLICATION RATE:
100 LB. OF N PER ACRE
200 LB. OF P205 PER ACRE
200 LB. OF K20 PER ACRE

C. PERMANENT SEED: SEED WEIGHTS GIVEN BELOW ARE PLS (PURE LIVE SEED)

MOWABLE AREA:
KENTUCKY BLUE GRASS: 25 LB PER ACRE
RED TOP: 3 LB PER ACRE
NORLEA PERENNIAL RYE: 15 LB PER ACRE
BIRDSFOOT TREFLOIL: 6 LBS PER ACRE

EMBANKMENT AREAS (DIVERSIONS AND SLOPES GREATER THAN 25%):
BIRDSFOOT TREFLOIL: 6 LB PER ACRE
REED CANARYGRASS: 10 LB PER ACRE
REDTOP: 3 LB PER ACRE

D. MULCH: OAT OR WHEAT STRAW, FREE FROM WEEDS, FOREIGN MATTER, INSTRUMENTAL TO PLANT LIFE AT A RATE OF 3 TONS PER ACRE.

E. LIME: AGRICULTURAL GRADE LIME AT A RATE CALCULATED FROM THE SOILS TEST TO BRING THE SOIL pH WITHIN 5.5 TO 6.0 APPLY AGRICULTURAL GRADE LIME AT A RATE OF 6 TONS PER ACRE IN THE ABSENCE OF A SOILS TEST.

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES

102.2(A) "THIS CHAPTER REQUIRES PERSONS PROPOSING OR CONDUCTING EARTH DISTURBANCE ACTIVITIES TO DEVELOP, IMPLEMENT AND MAINTAIN BMP'S TO MINIMIZE THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION."

102.4(B)(3) "THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE PREPARED BY A PERSON TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL METHODS AND TECHNIQUES, AND SHALL BE DESIGNED TO MINIMIZE THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION."

1. VEHICLES AND EQUIPMENT MAY ONLY ENTER THE PROJECT SITE AT THE ROCK CONSTRUCTION ENTRANCE LOCATION.

2. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

3. UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE OPERATOR SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICE FACILITIES AND MAINTAIN AND MAKE AVAILABLE TO LACKAWANNA COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, REGRADING, AND RESTABILIZATION SHALL BE PERFORMED IMMEDIATELY.

4. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

5. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE LACKAWANNA CONSERVATION DISTRICT.

6. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PAN HAS BEEN PREPARED, APPROVED BY THE LACKAWANNA COUNTY CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.

7. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS SO THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

8. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

102.4(B)(5)(I) "THE EXISTING TOPOGRAPHIC FEATURES OF THE PROJECT SITE AND THE IMMEDIATE SURROUNDING AREA."

9. THE E&S CONTROL PLAN MAPPING MUST DISPLAY A PA ONE CALL SYSTEM INCORPORATED SYMBOL INCLUDING THE SITE IDENTIFICATION NUMBER. (THIS IS A NUMBERED SYMBOL NOT A NOTE.)

102.4(B)(5)(VI) "A SEQUENCE OF BMP INSTALLATION AND REMOVAL IN RELATION TO THE SCHEDULING OF EARTH DISTURBANCE ACTIVITIES, PRIOR TO, DURING, AND AFTER EARTH DISTURBANCE ACTIVITIES."

102.4(B)(4) "EARTH DISTURBANCE ACTIVITIES SHALL BE PLANNED AND CONDUCTED TO MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE."

102.22(A) "UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION.

10. EROSION AND SEDIMENT BMP MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S. E&SPCPM P168

11. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP'S CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF BMP'S MUST BE STABILIZED IMMEDIATELY. E&SPCPM P168

12. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE LACKAWANNA CONSERVATION DISTRICT TO AN ON-SITE MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.

13. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

14. IMMEDIATELY AFTER EACH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

15. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A RESISTIVE SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

TEMPORARY STABILIZATION & PERMANENT STABILIZATION

16. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

17. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.

18. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

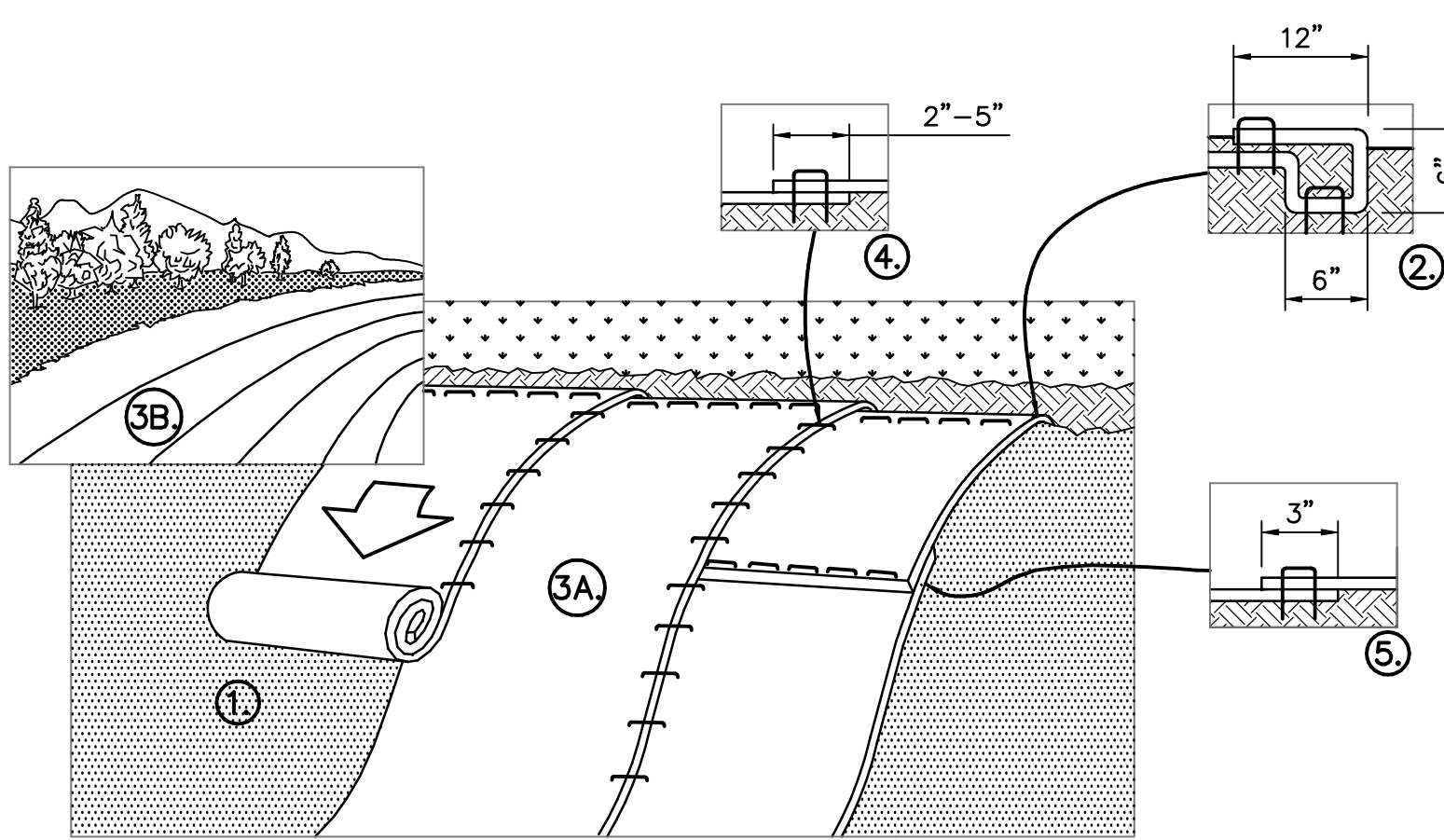
102.4(B)(5)(X) "A MAINTENANCE PROGRAM WHICH PROVIDES FOR INSPECTION OF BMP'S ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT, INCLUDING THE REPAIR OF THE BMP'S TO ENSURE EFFECTIVE AND EFFICIENT OPERATION."

19. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED. E&SPCPM P168

20. SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN TOPSOIL STOCKPILES.

102.4(B)(5)(VII) "PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH THIS TITLE."

21. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601. ET SEQ., 271.1, AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED PREPARE AREA, CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.

3. ROLL THE BLANKETS (A) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEMSM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON BLANKET TYPE.

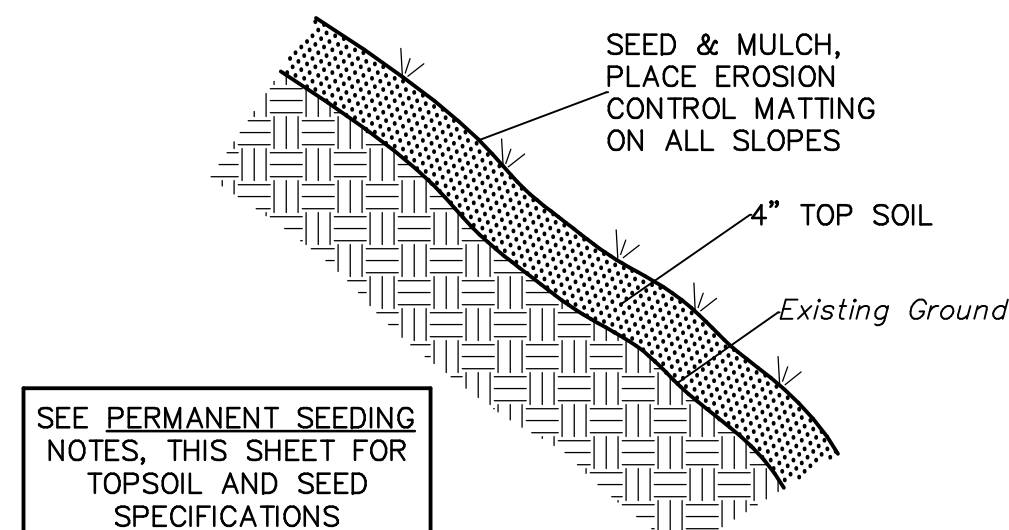
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

INSTALLATION OF EROSION CONTROL MATTING FOR SLOPE PROTECTION

NOT TO SCALE

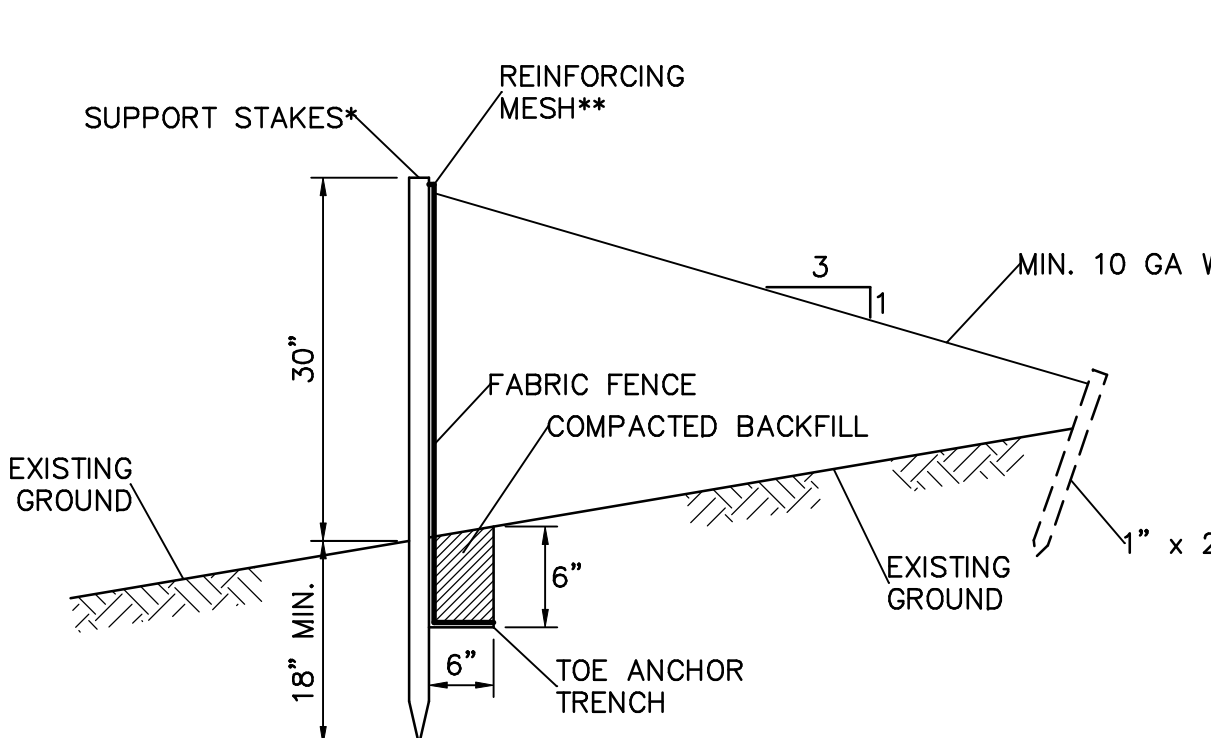
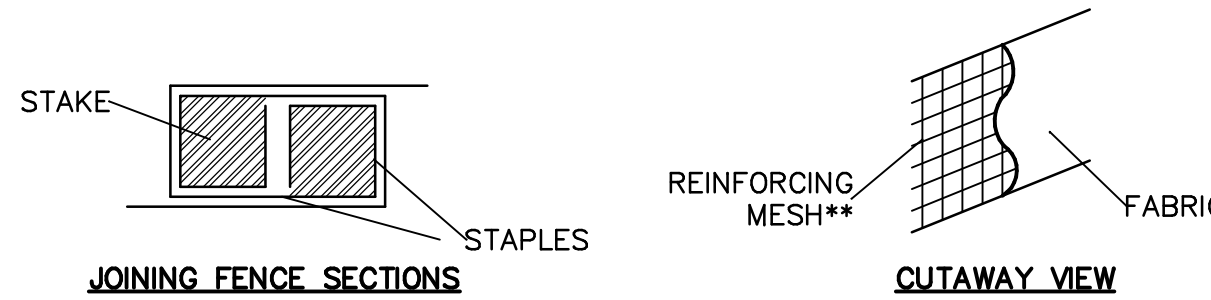
ES003016



TOPSOIL & SEED PLACEMENT DETAIL

NOT TO SCALE

ES001005



* STAKES SPACED @ 8' MAX. USE 2" x 2" WOOD OR EQUIVALENT STEEL STAKES.

**EITHER INDUSTRIAL POLYPROPYLENE OR STEEL MESH WITH 6" MAX. OPENING STEEL MESH SHALL BE 14 GA. MIN.

FILTER FABRIC FENCE MUST BE INSTALLED AT EXISTING LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION MUST BE EXTENDED AT LEAST 8 FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.

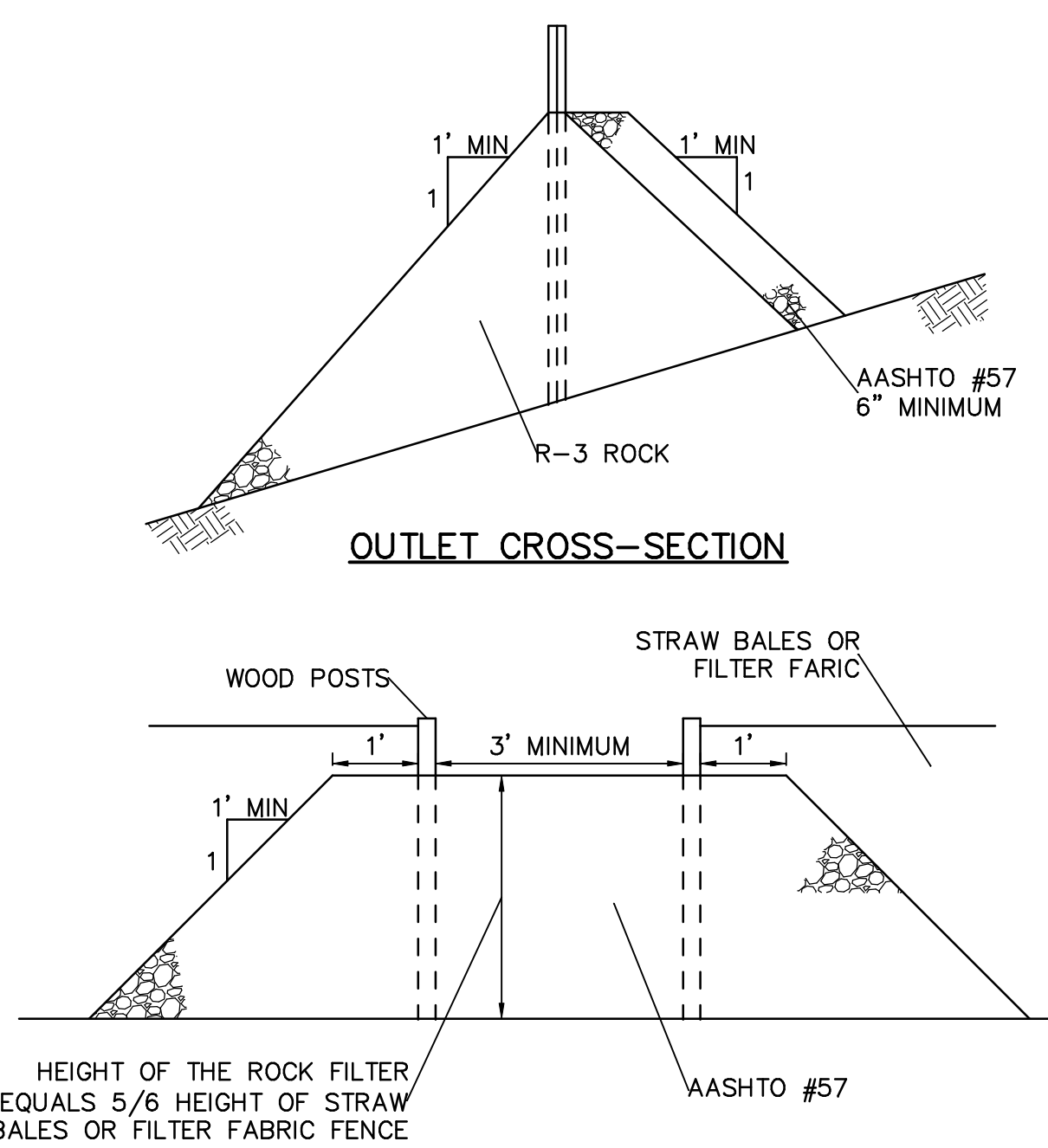
ANY FENCE SECTION WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.

NOTE: SHOW ALL DETAILS AND CONSTRUCTION DIMENSIONS ON PLAN DRAWINGS.

STANDARD CONSTRUCTION DETAIL #20
(30" HIGH)
REINFORCED FILTER FABRIC FENCE

NOT TO SCALE

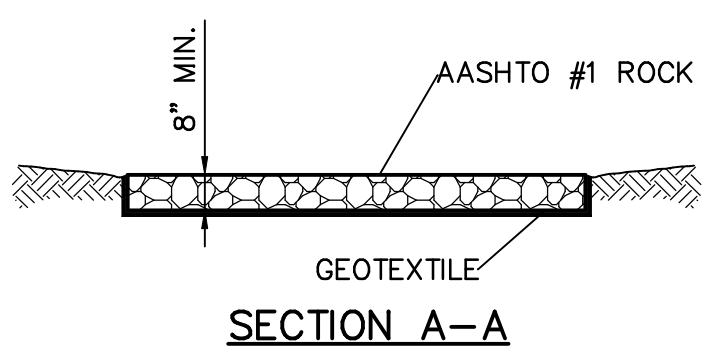
ES003005



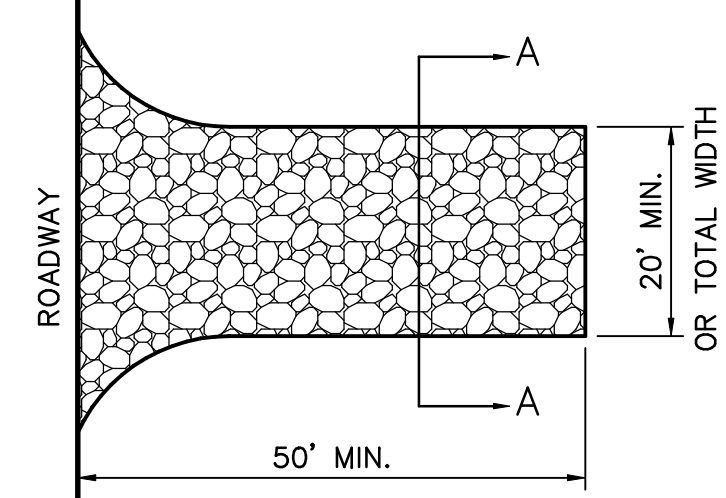
SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET, OR REPLACED WITH NEW ROCK.

ROCK FILTER OUTLET
NOT TO SCALE
ES003004

* INSTALL ROCK FILTER OUTLETS AS DIRECTED WHERE SILT FENCING CANNOT HANDLE THE CONDITIONS OF THE SITE, AS DIRECTED IN NOTE OF THE SILT BARRIER FENCE DETAIL.



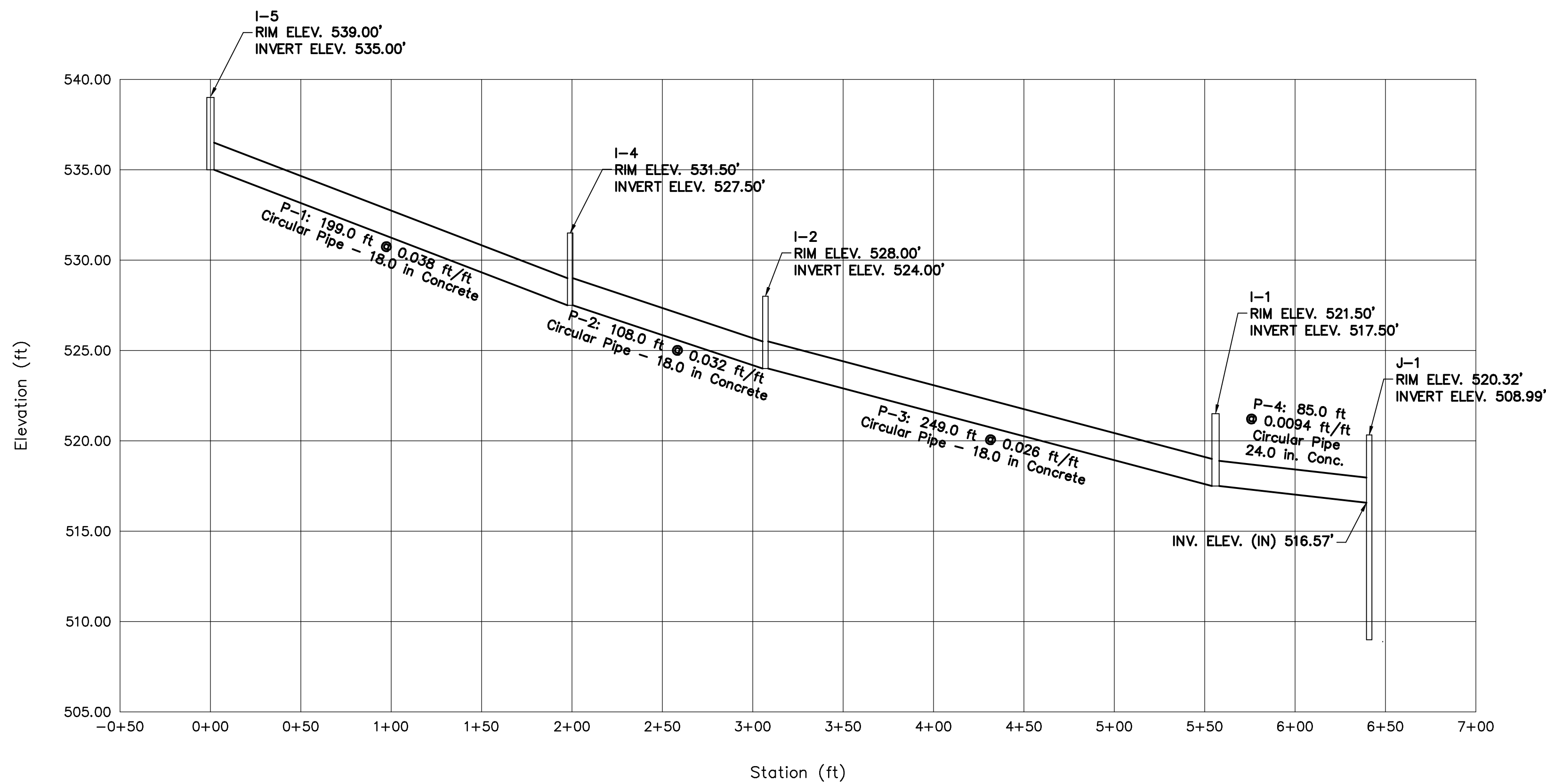
SECTION A-A



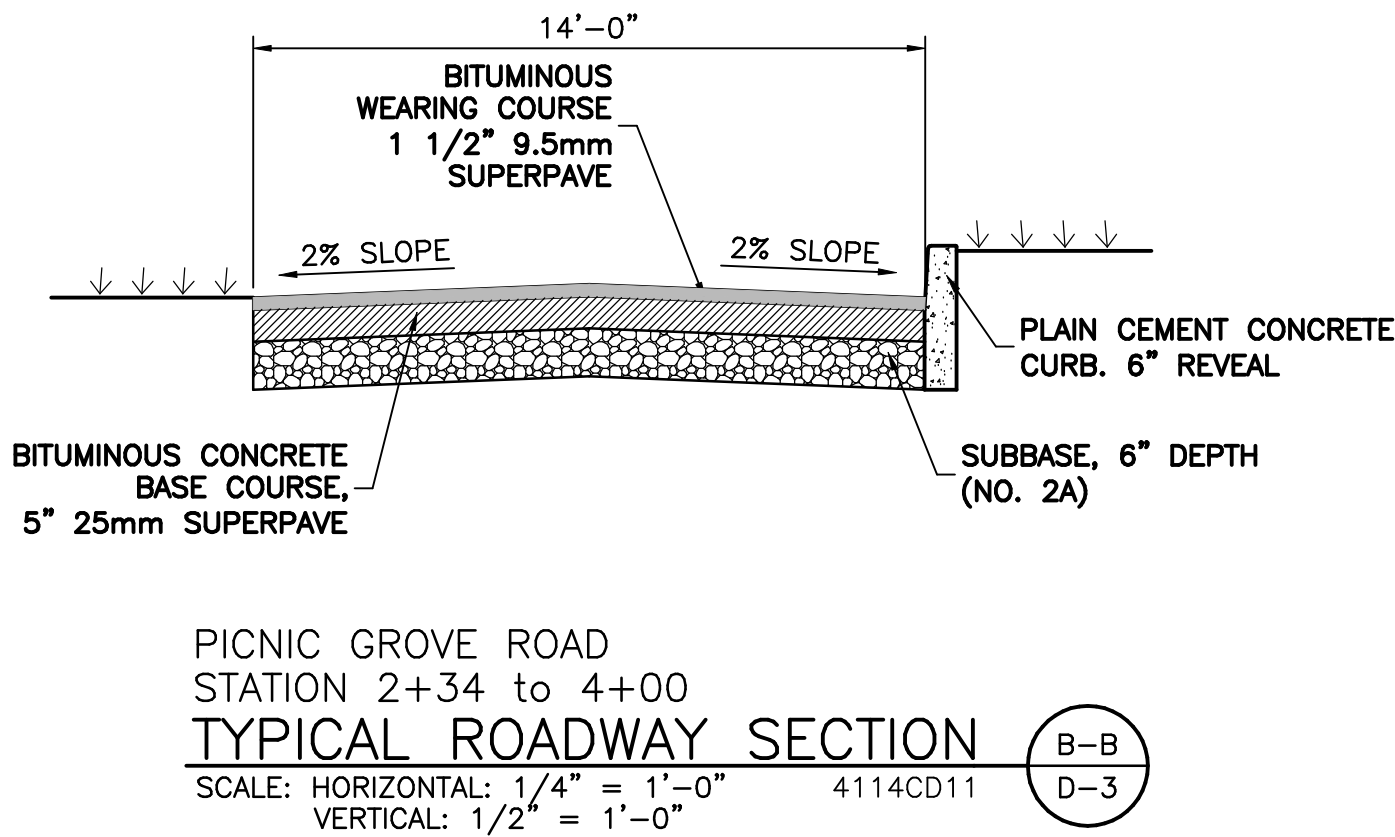
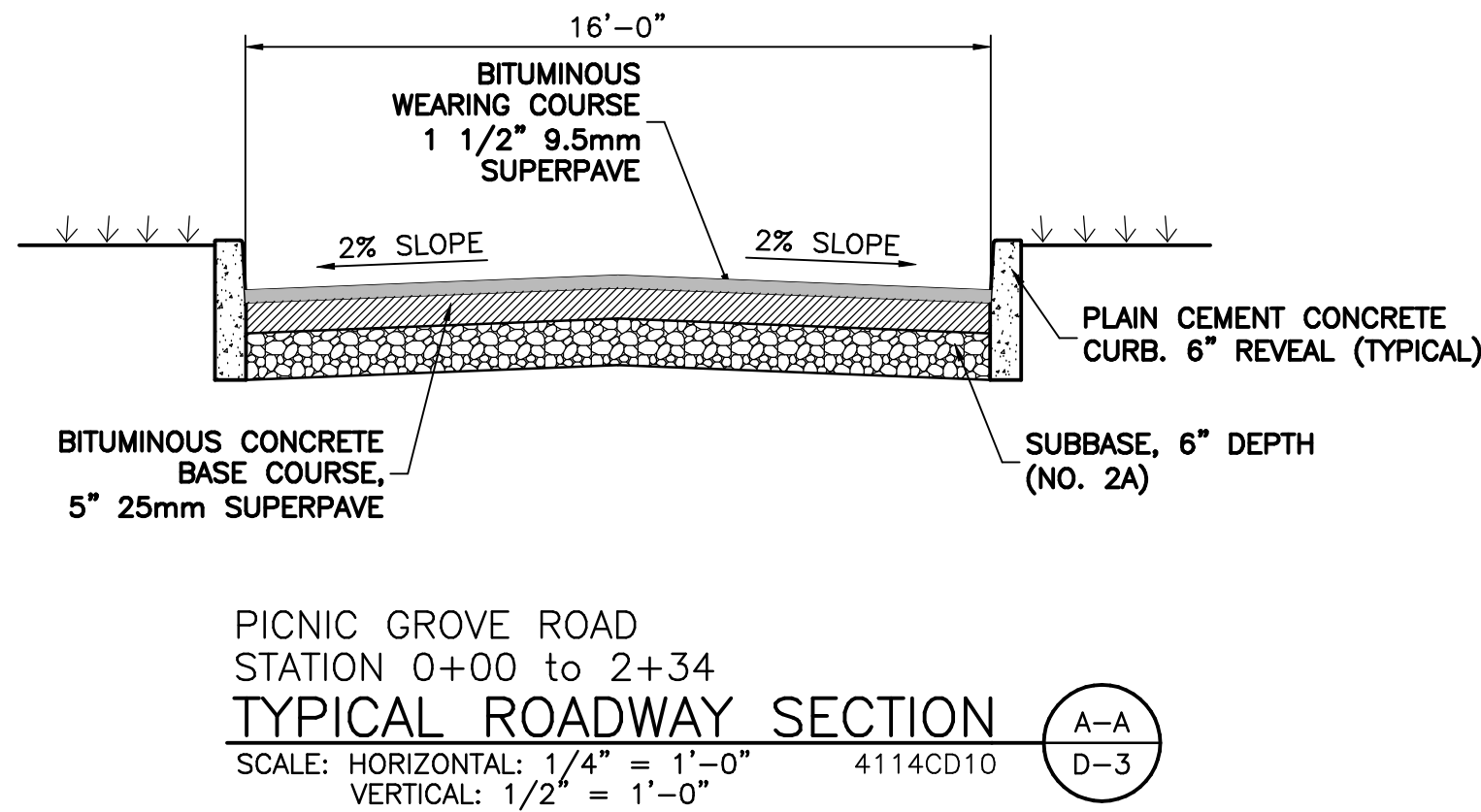
MAINTENANCE:
ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.

ROCK CONSTRUCTION ENTRANCE DETAILS
NOT TO SCALE
ES004001

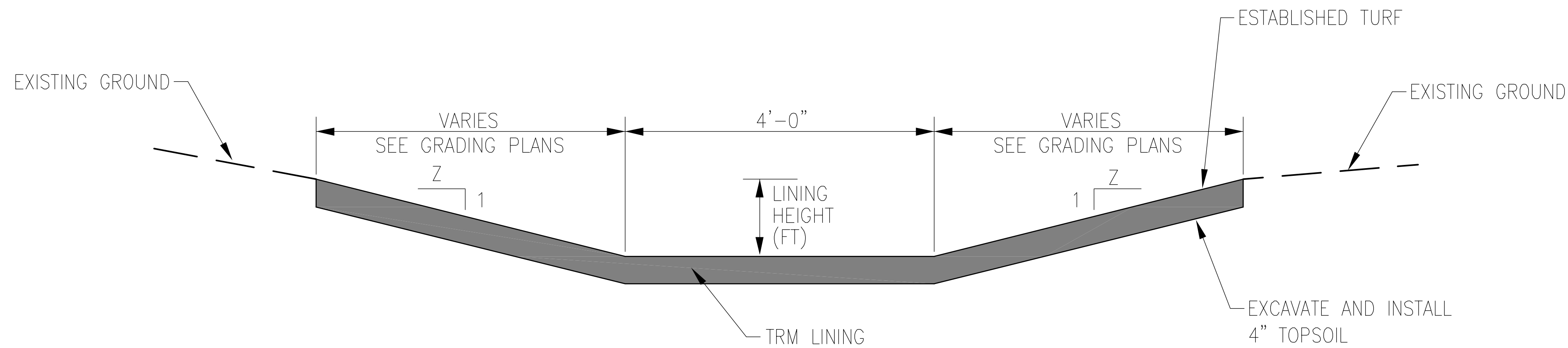
 Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business		 SDVOSB Service Disabled Veteran Owned Small Business		 McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607)223-9421 FAX (607)223-4979 www.mjinc.com		4114D020						Drawing Title E&S DETAILS AND NOTES		Project Title LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS		Project Number VA PROJ. NO. 595-11-133					
Revisions		Date										Location Lebanon, PA		Date 04-20-12		Checked DK				Drawn LB	



PROFILE ALONG STORMWATER PIPE – WORK AREA 1
SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

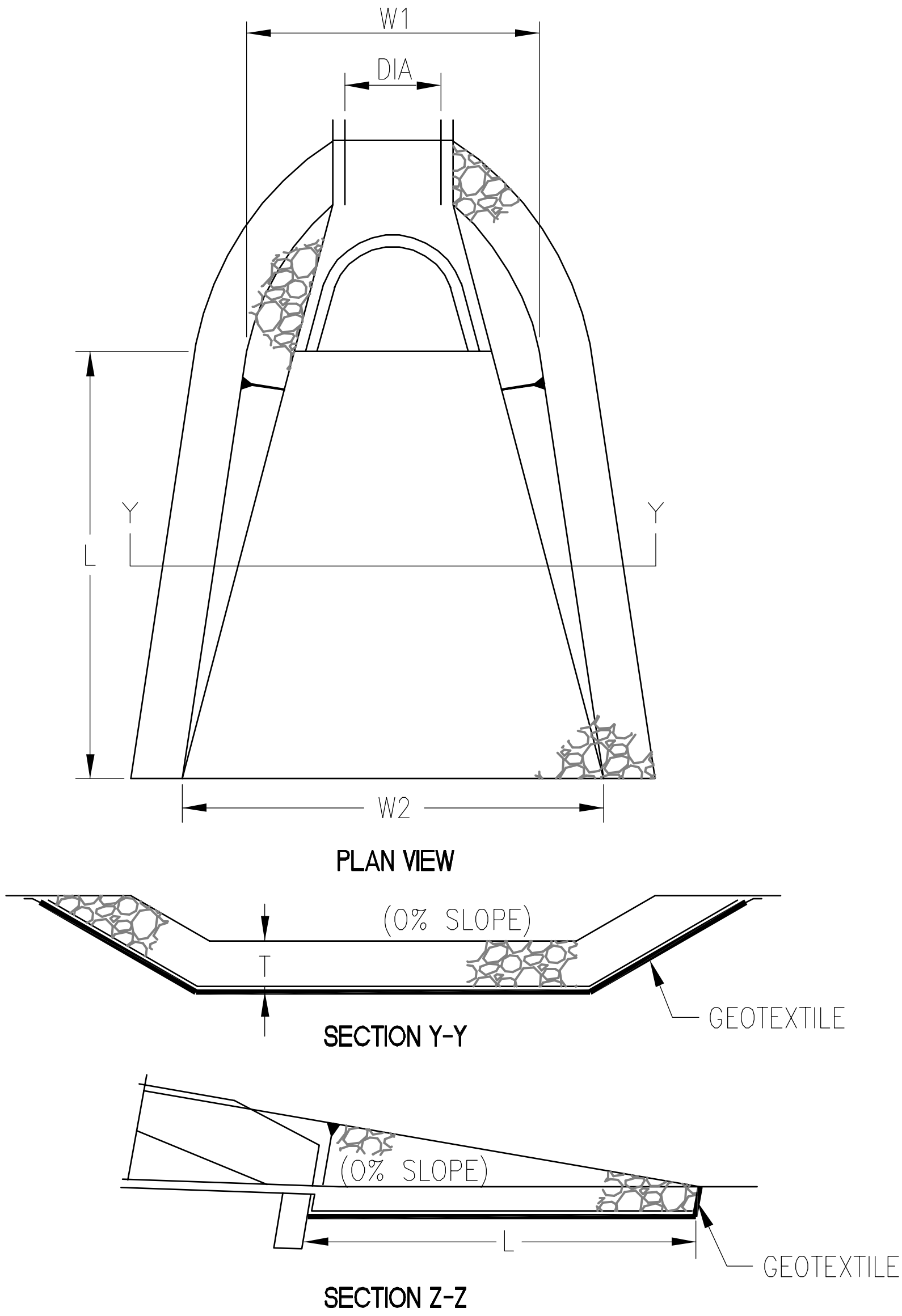


<div>Revisions</div>		<div>Date</div>		<div>Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business</div>		<div></div>		<div>McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607)723-9421 FAX (607)723-4979 www.mjinc.com</div>		4114D030		<div></div>		<div></div>		<div>Drawing Title</div> <div>PIPE PROFILE AND ROADWAY SECTIONS</div>		<div>Project Title</div> <div>LEBANON VA Medical Center STORMWATER MANAGEMENT IMPROVEMENTS</div>		<div>Project Number</div> <div>VA PROJ. NO. 595-11-133</div>		<div>Building Number(s)</div> <div></div>		<div>Location</div> <div>Lebanon, PA</div>		<div>Date</div> <div>04-20-12</div>		<div>Checked</div> <div>DK</div>		<div>Drawn</div> <div>LB</div>		<div>Drawing Number</div> <div>D-3</div>		<div>Dwa. 14 of 16</div>		<div></div> <div>Department of Veterans Affairs</div>	
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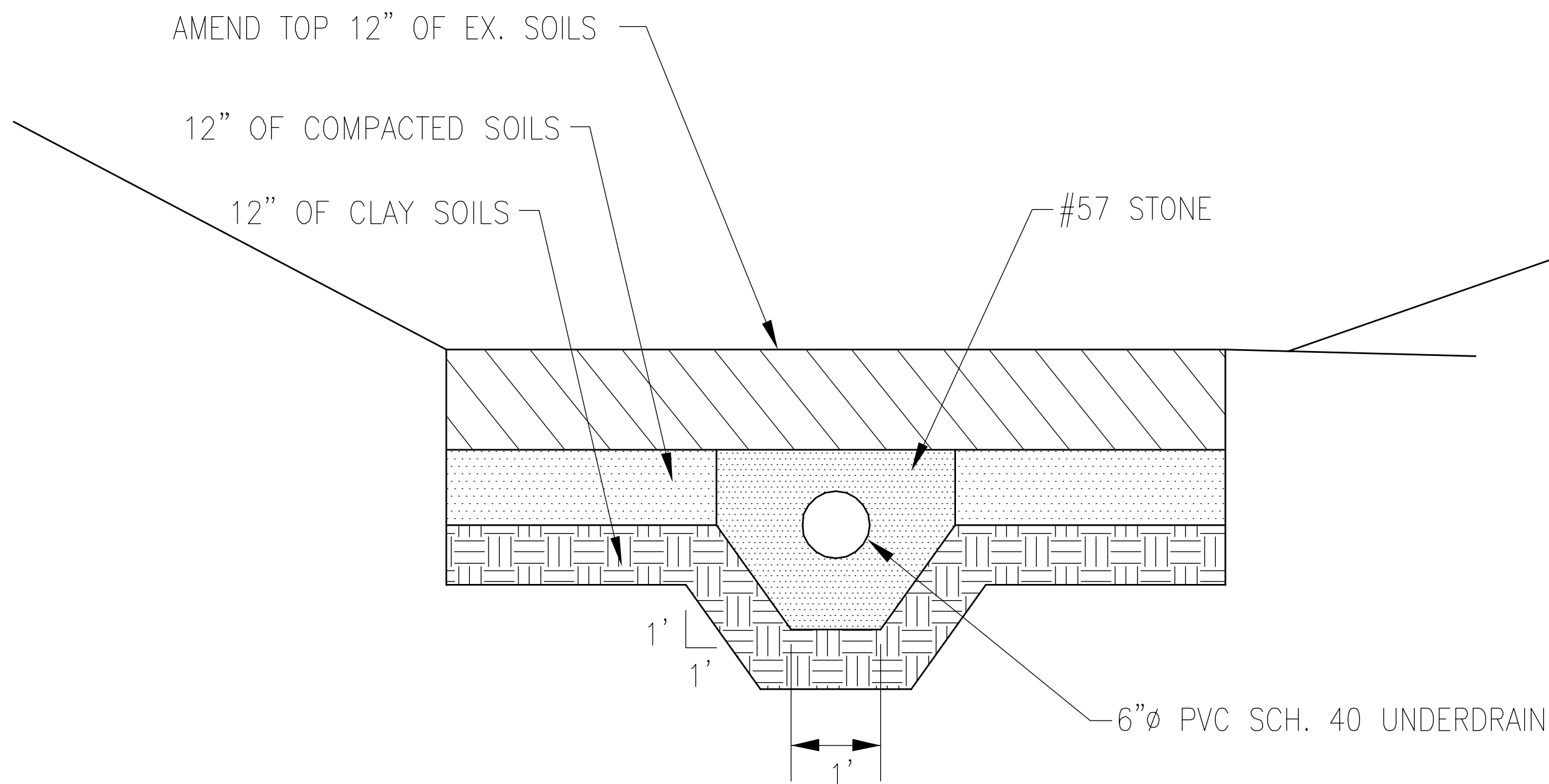
DRAINAGE CHANNEL AND TURF REINFORCED MAT (TRM) TABLE							
LOCATION	DESIGN FLOW (CFS)	VELOCITY (FPS)	NORMAL DEPTH (FT)	LINING HEIGHT (FT)	CHANNEL SIDESLOPE (Z)	TRIM AREA (SF)	TURF REINFORCED MAT
DA1 EMERGENCY SPILLWAY	9	7.8	0.1	1	4	2000	* NORTH AMERICAN GREEN C350
DA2 EMERGENCY SPILLWAY	45	8.3	0.4	1	4	3300	* NORTH AMERICAN GREEN C350
CH-1	20	7.5	0.5	1	4	5100	* NORTH AMERICAN GREEN C350
CH-2	8	2.9	0.4	1	10	3325	* NORTH AMERICAN GREEN C350
CH-3	NORTH AMERICAN GREEN C125BN OR AN APPROVED BIOPREFERRED EQUIVALENT						
CH-4	19	3.2	0.7	1	6	1410	* NORTH AMERICAN GREEN C350
* OR APPROVED EQUIVALENT							

DRAINAGE CHANNEL DETAIL



OUTLET ID	OUTLET PIPE DIA (IN)	RIPRAP		APRON		
		SIZE	THICKNESS (T)	LENGTH (L)	WIDTH (W1)	WIDTH (W2)
			(IN)	(FT)	(FT)	(FT)
BASIN DA1	12	R-4	18	11	3	10
BASIN DA2	18	R-5	27	16	5	15
AP-1	21	R-4	18	22	4	13
AP-2	18	R-4	18	8	5	10
AP-3	NOT USED					
AP-4	15	R-5	27	18	4	16

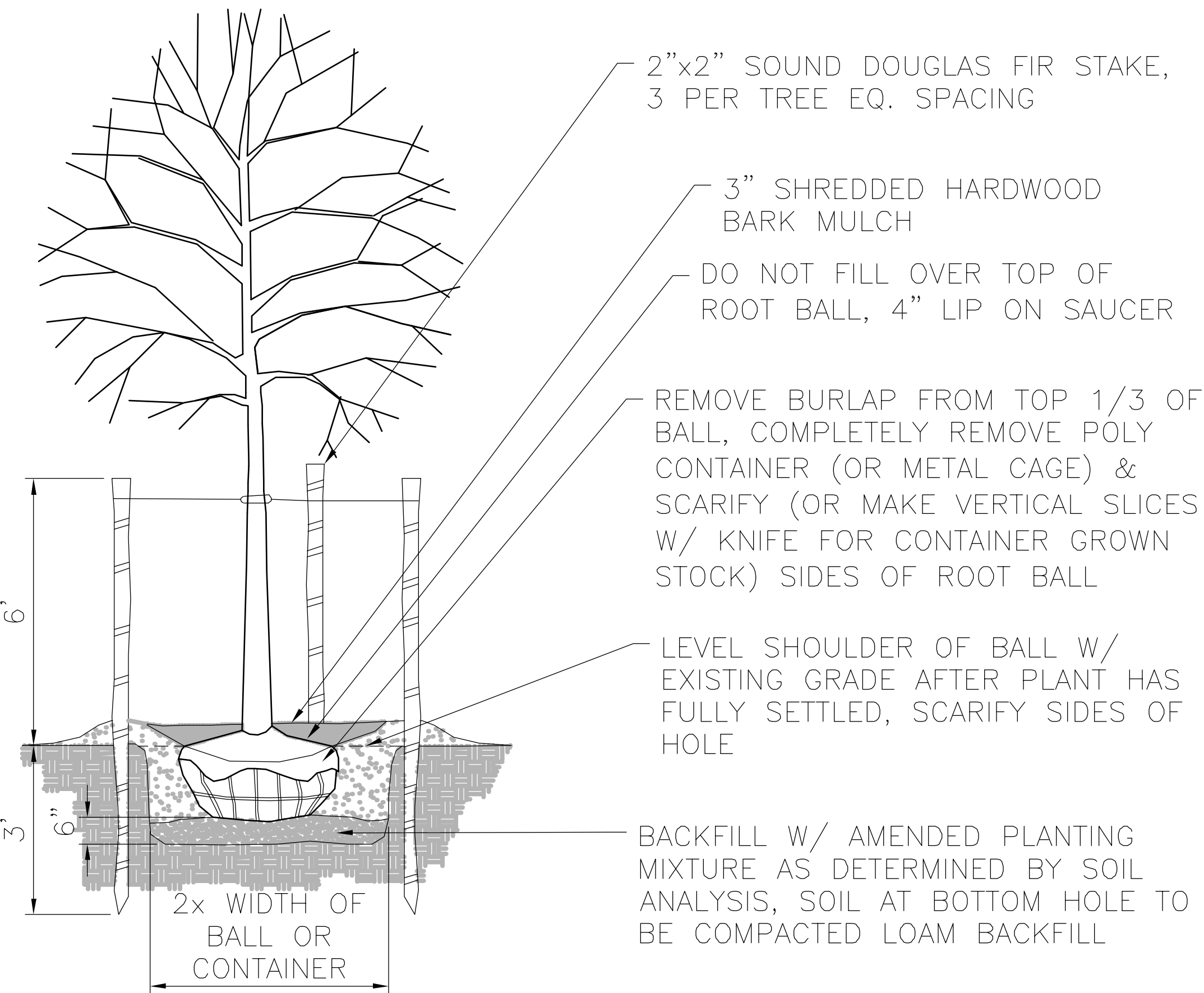
RIPRAP APRON DETAIL



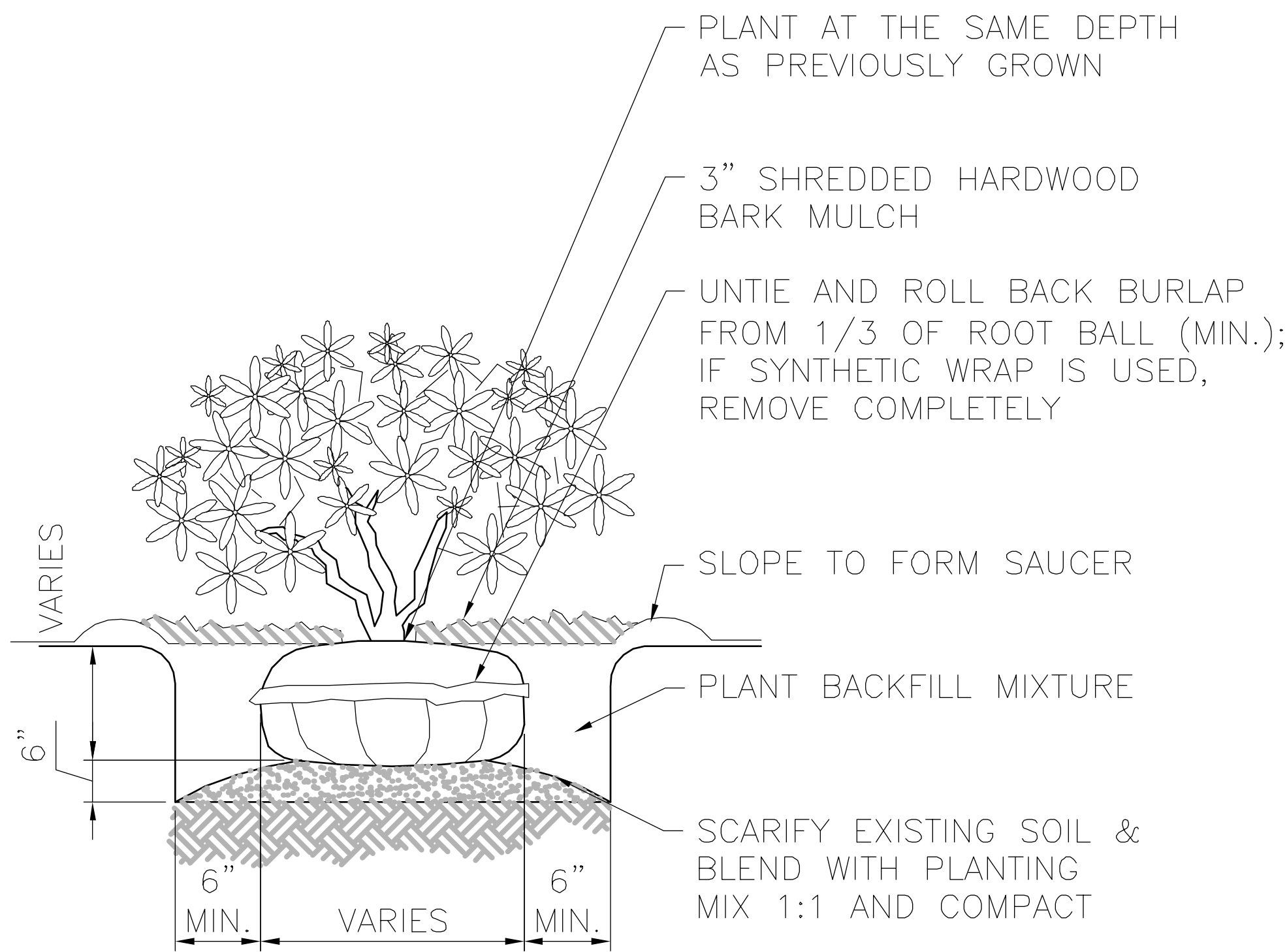
CLAY LINER DETAIL
NOT TO SCALE

GENERAL NOTES:

1. COMPACTED SOILS SHOULD BE FREE OF ROCK LARGER THAN 2" AND SHOULD BE COMPACTED TO 95%.
2. CLAY SOILS SHALL MEET THE FOLLOWING: PERMEABILITY OF 1x10-6. PLASTICITY INDEX OF NOT LESS THAN 15%, LIQUID LIMIT OF NOT LESS THAN 30% AND CLAY COMPACTION NOT LESS THAN 95%. CONTRACTOR MAY SUBSTITUTE BENTONITE FOR CLAY.

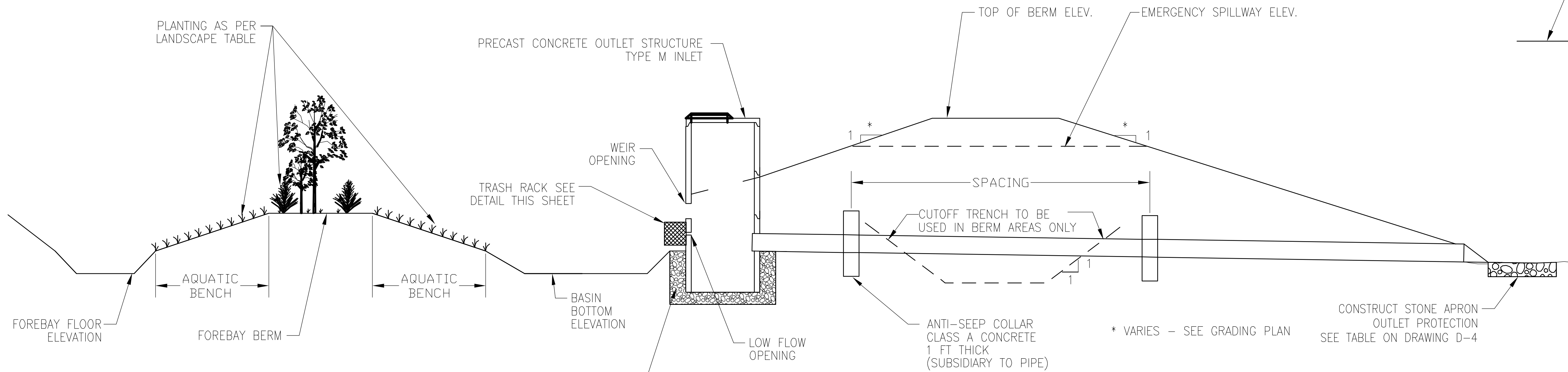


DECIDUOUS TREE PLANTING



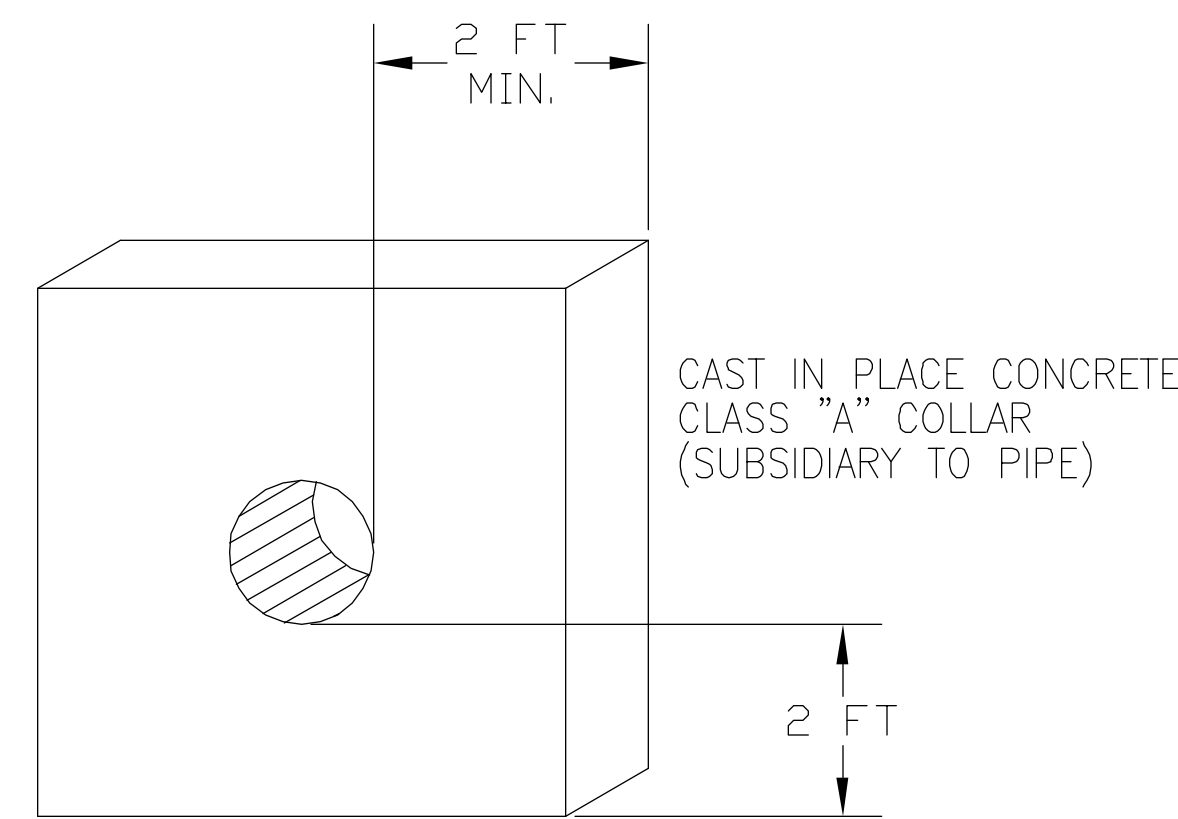
SHRUB PLANTING

Revisions	Date	 Lamereaux Consulting, LLC Building Construction & Site Design Services 25 South Washington Avenue (570) 876-5350 Jermyn, Pennsylvania 18433 Service Disabled Veteran Owned Small Business	 McFarland Johnson 49 COURT STREET, METROCENTER BINGHAMTON, NEW YORK 13901 TEL (607)723-9421 FAX (607)723-4979 www.mjinc.com			Drawing Title DRAINAGE DETAILS	Project Title LEBANON VA Medical Center STORMWATER STUDY	Project Number VA PROJ. NO. 595-11-133 Building Number(s) Drawing Number D-4 Dwn. 15 of 16	
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RETENTION BASIN SECTION

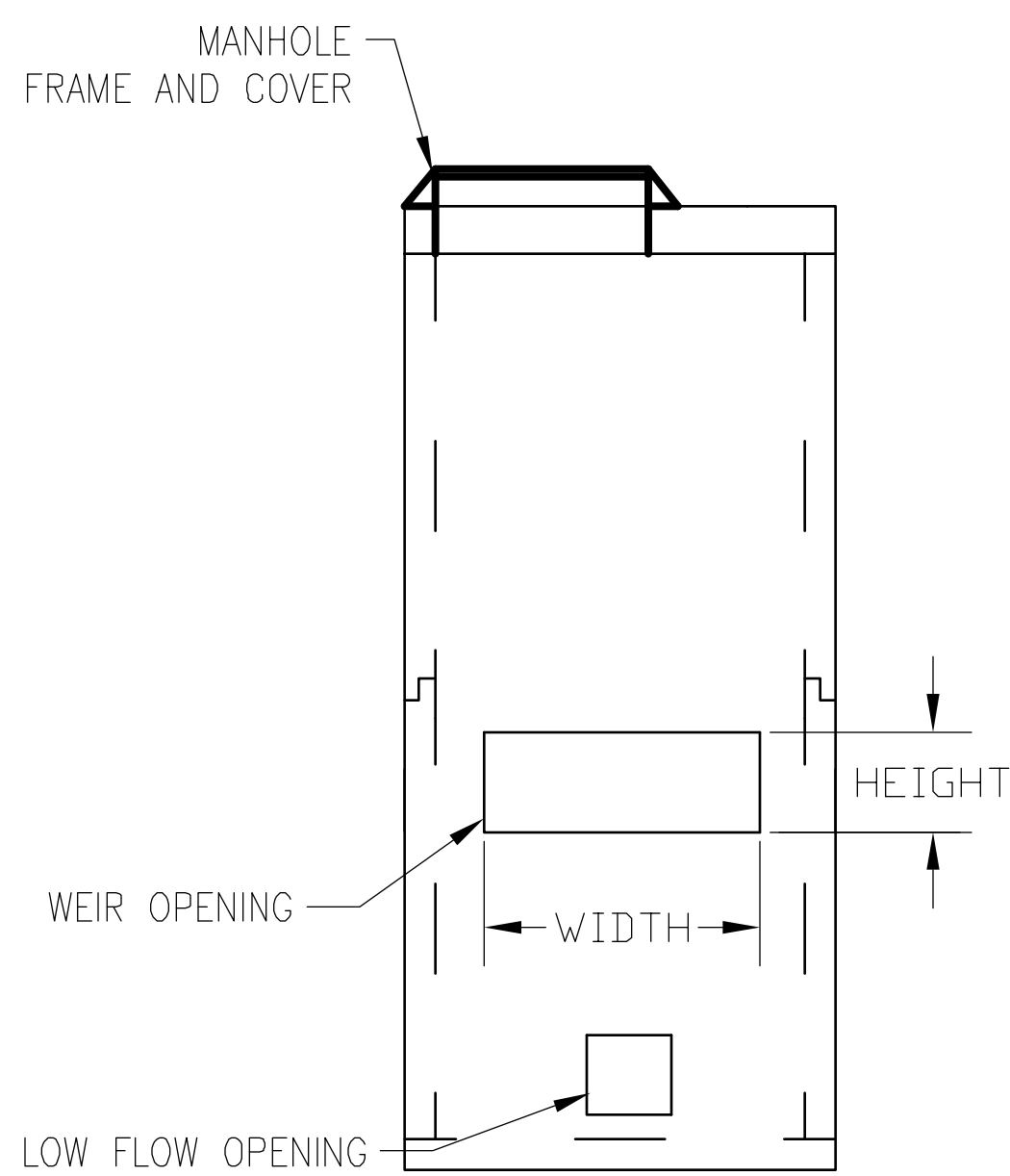
EMERGENCY SPILLWAY DETAIL
NOT TO SCALE



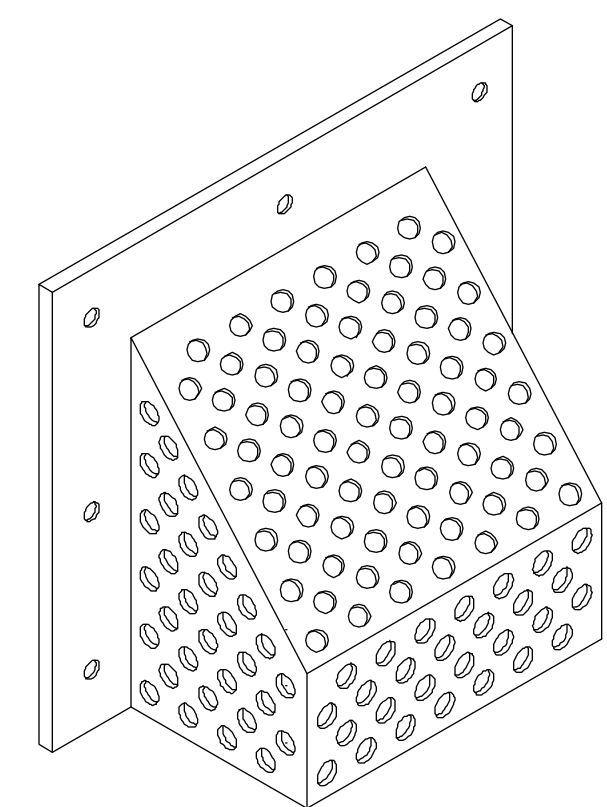
ANTI-SEEP COLLAR DETAIL
NOT TO SCALE

- NOTES:**
- CUTOFF TRENCH CORE MATERIAL UNIFIED CLASS, ML1, COMPACTED TO 95% OF MAX. DRY DENSITY, OR AN APPROVED BENTONITE/SOIL MIX.
 - EXCAVATE CUTOFF TRENCH 2 FT INTO EXISTING GROUND.
 - CUTOFF TRENCH BOTTOM WIDTH SHALL BE 4 FT MINIMUM.
 - CUTOFF TRENCH TOP ELEVATION SHALL EXTEND TO 1/2 FT BELOW SPILLWAY ELEVATION.
 - DA1 COLLAR SPACING = 27 FT, NUMBER OF COLLAR = 2.
 - DA2 COLLAR SPACING = 31 FT, NUMBER OF COLLAR = 5.

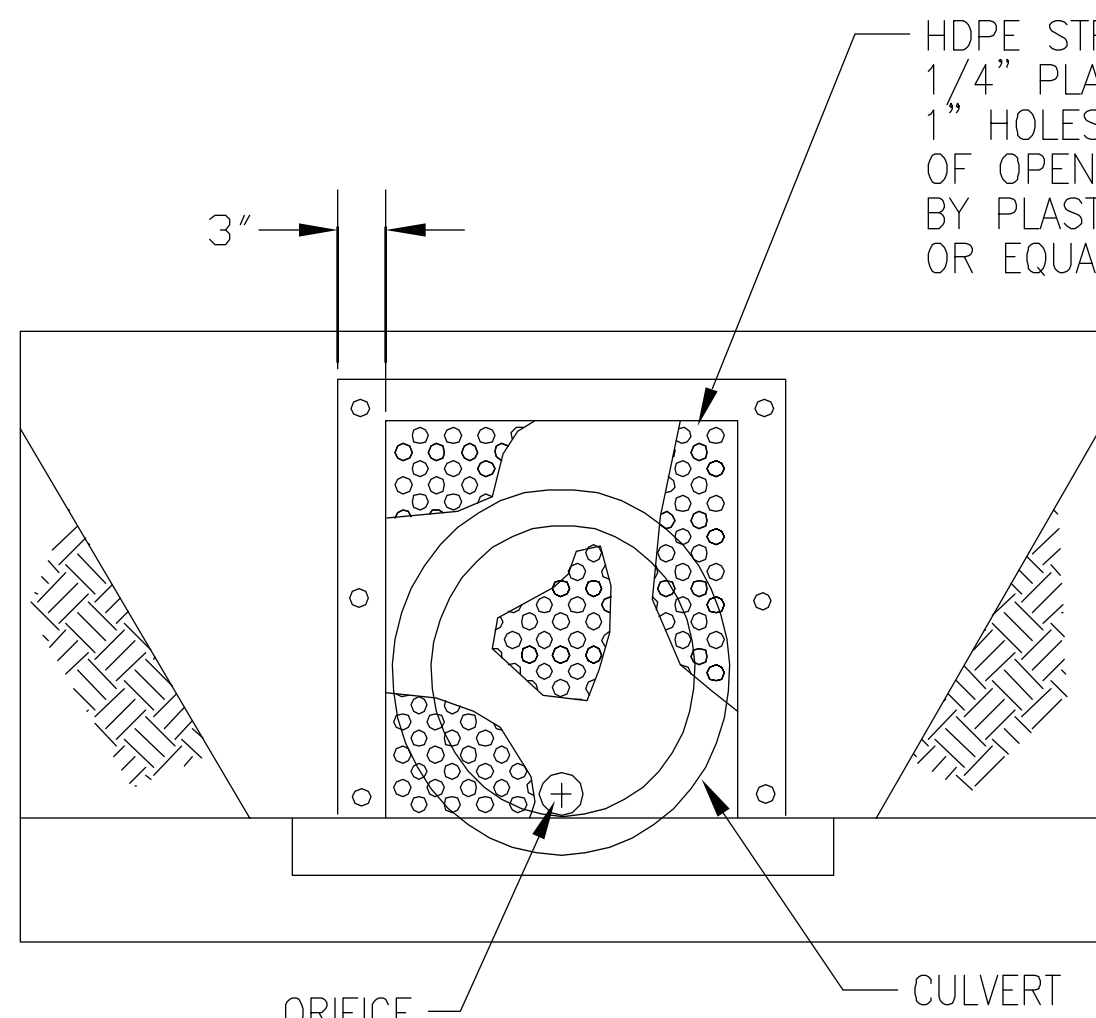
RETENTION BASIN CONSTRUCTION DATA																		
	RETENTION BASIN OUTLET STRUCTURE DETAILS										BASIN ELEVATIONS							
	OUTLET PIPE					LOW FLOW OPENING		WEIR			EMERGENCY SPILLWAY DATA				BASIN DATA			
RETENTION BASIN ID	PIPE SIZE	INLET INVERT	OUTLET INVERT	PIPE LENGTH	OUTLET PROTECTION	SIZE	INVERT ELEV.	WIDTH (FT)	HEIGHT (FT)	INVERT ELEV.	WIDTH (FT)	SPILLWAY ELEV.	BERM ELEV.	100-YR ELEV.	BASIN BOTTOM ELEV.	TOP OF BERM ELEV.	FOREBAY BOTTOM ELEV.	FOREBAY TOP ELEV.
DA 1	12"	500.00	499.50	80	SEE TABLE	4 IN x 4 IN	502.00	3	1	502.50	10	504.00	505.50	504.49	500.00	505.50	500.00	502.80
DA 2	18"	500.00	498.50	187	SEE TABLE	8 IN x 8 IN	502.00	4	1	502.50	10	504.00	506.50	505.41	500.00	506.50	500.00	502.80



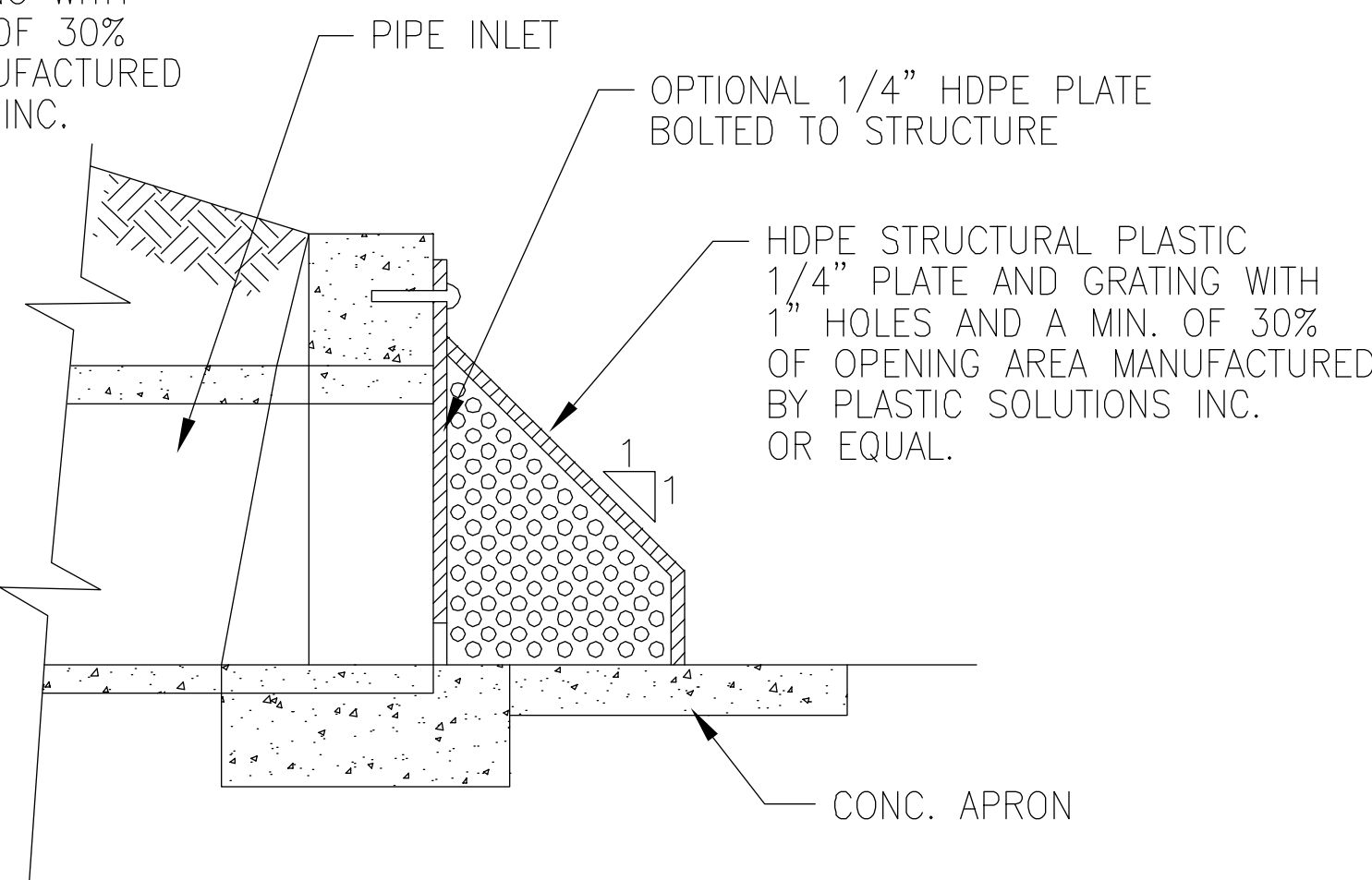
TYPE M INLET



TRASH RACK ISOMETRIC VIEW
NOT TO SCALE



TRASH RACK ELEVATION VIEW
NOT TO SCALE



TRASH RACK SECTION VIEW
NOT TO SCALE

RETENTION BASIN GENERAL CONSTRUCTION NOTES:

- CONTRACTOR SHALL PROVIDE PROOF OF PRIOR EXPERIENCE CONSTRUCTING RETENTION BASIN GRADING AND LANDSCAPING ELEMENTS. A MINIMUM OF THREE (3) REFERENCES IS REQUIRED WITH THE PROPOSAL SUBMISSION.
- A "QUALIFIED ENVIRONMENTAL SUPERVISOR" WILL BE PRESENT ON SITE WHILE WORK IS BEING PERFORMED IN SUPERVISOR" SHALL BE AN INDIVIDUAL, REPRESENTING THE OWNER, WHO IS EDUCATED IN OR HAS RECEIVED SPECIALIZED TRAINING IN THE CONSTRUCTION OF RETENTION BASIN GRADING AND LANDSCAPING.
- CONTRACTOR SHALL INSTALL VEGETATION PROTECTION BARRIER PRIOR TO COMMENCING CLEARING AND GRADING ACTIVITIES AND SHALL NOT ENTER THE PROTECTED SITE DURING CONSTRUCTION.
- INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S AS SHOWN ON DRAWING NO. D-2.
- CONTRACTOR SHALL STAKE OFF THE BOTTOM OF THE RETENTION BASINS AND FIELD MARK.
- EXCAVATE RETENTION BASINS TO PROPOSED DEPTH.
- INSTALL PERMEABLE LINER IF REQUIRED.
- BACKFILL THE RETENTION BASINS WITH AMENDED SOILS AS SHOWN ON PLANS AND SPECIFICATIONS. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT.
- PRESOAK THE PLANTING SOILS PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT.
- PLANT THE BOTTOM AND INTERIOR EMBANKMENTS OF THE RETENTION BASINS WITH ERNST CONSERVATION SEED MIX ERNMx-127 (RETENTION BASIN FLOOR SEEDING FOR WILDLIFE & PLANT DIVERSITY MIX) @ 20 LBS/ACRE.
- PLANT THE EXTERIOR EMBANKMENTS AND ADDITIONAL DISTURBED AREAS WITH ERNST CONSERVATION SEED MIX ERNMx-174 (VIRGINIA GENTLEMEN MIX) @ 20 LBS/ACRE.
- MULCH DISTURBED AREAS WITH STRAW @ 2 TONS/ACRE.
- WATER NEW ESTABLISHED PLANTING AREAS AFTER INSTALLATION OF PLANTS.
- AS PART OF THE CONSTRUCTION PHASE, SOIL, GEOLOGIC AND INFILTRATION TESTING SHALL BE CONDUCTED TO ASSURE THAT CONDITIONS ARE CONDUCIVE TO UTILIZE THIS TYPE OF STORMWATER MANAGEMENT PRACTICE.